

FIG.1

FIG. 1

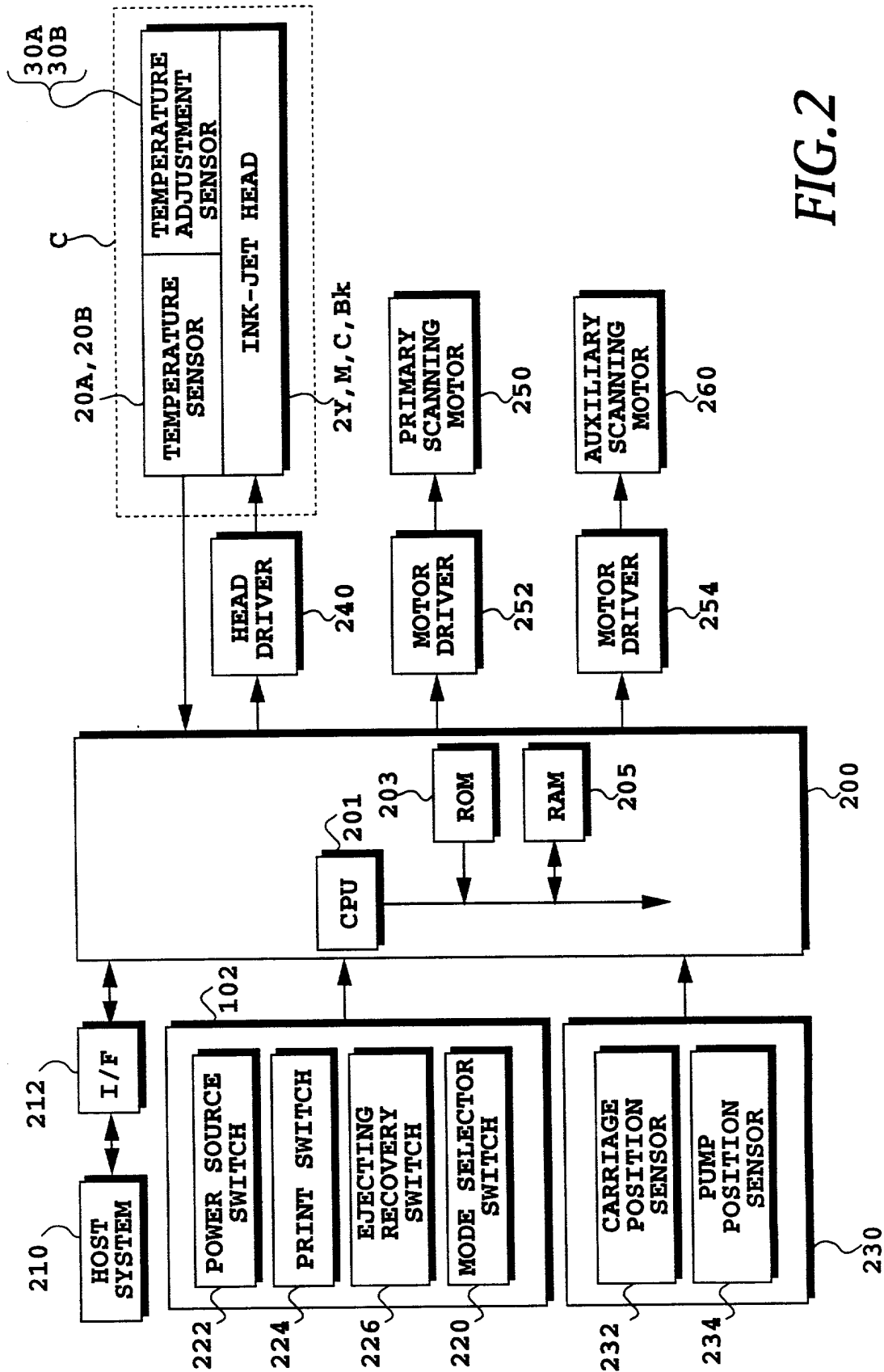


FIG. 2

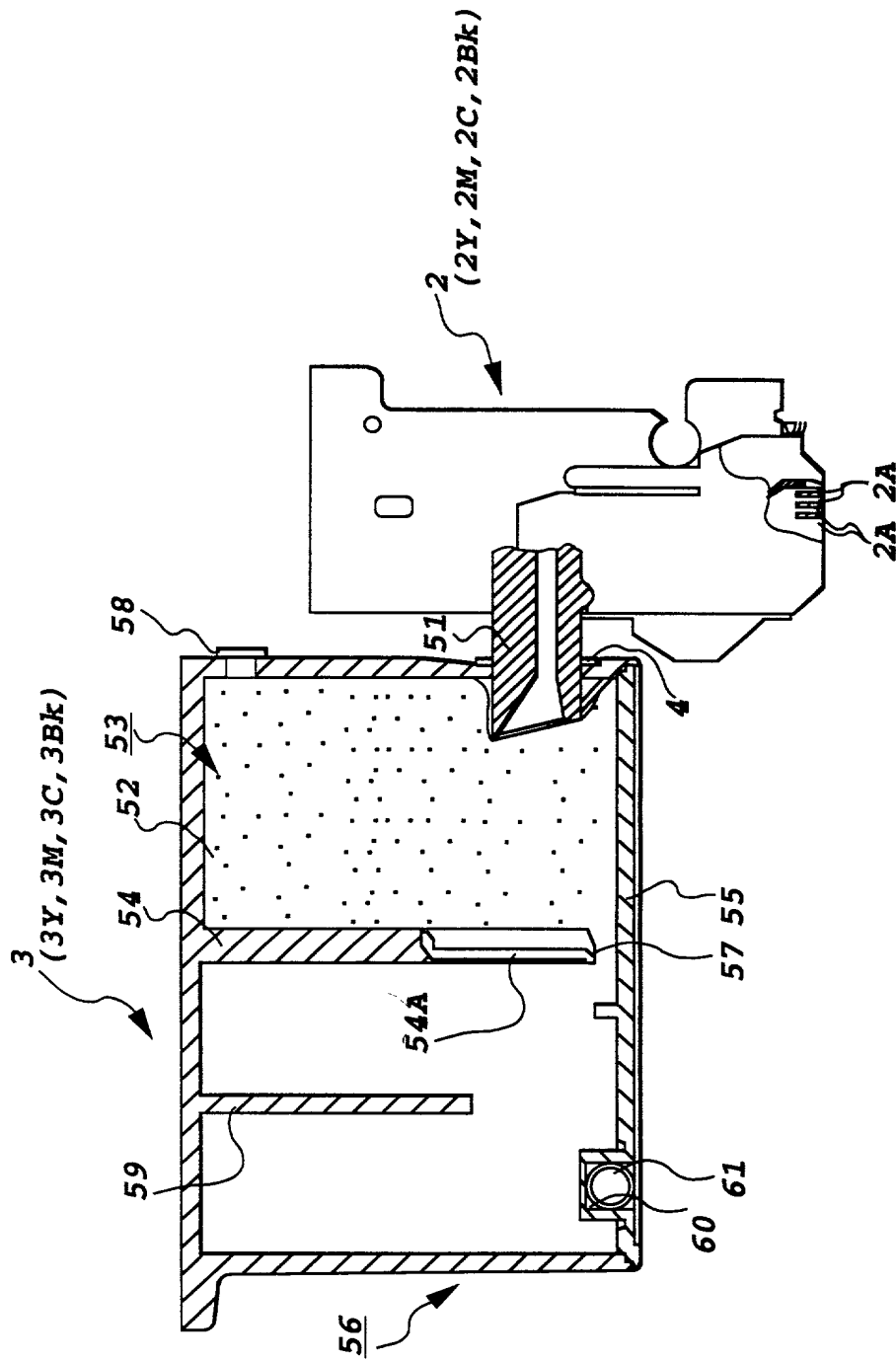


FIG. 3

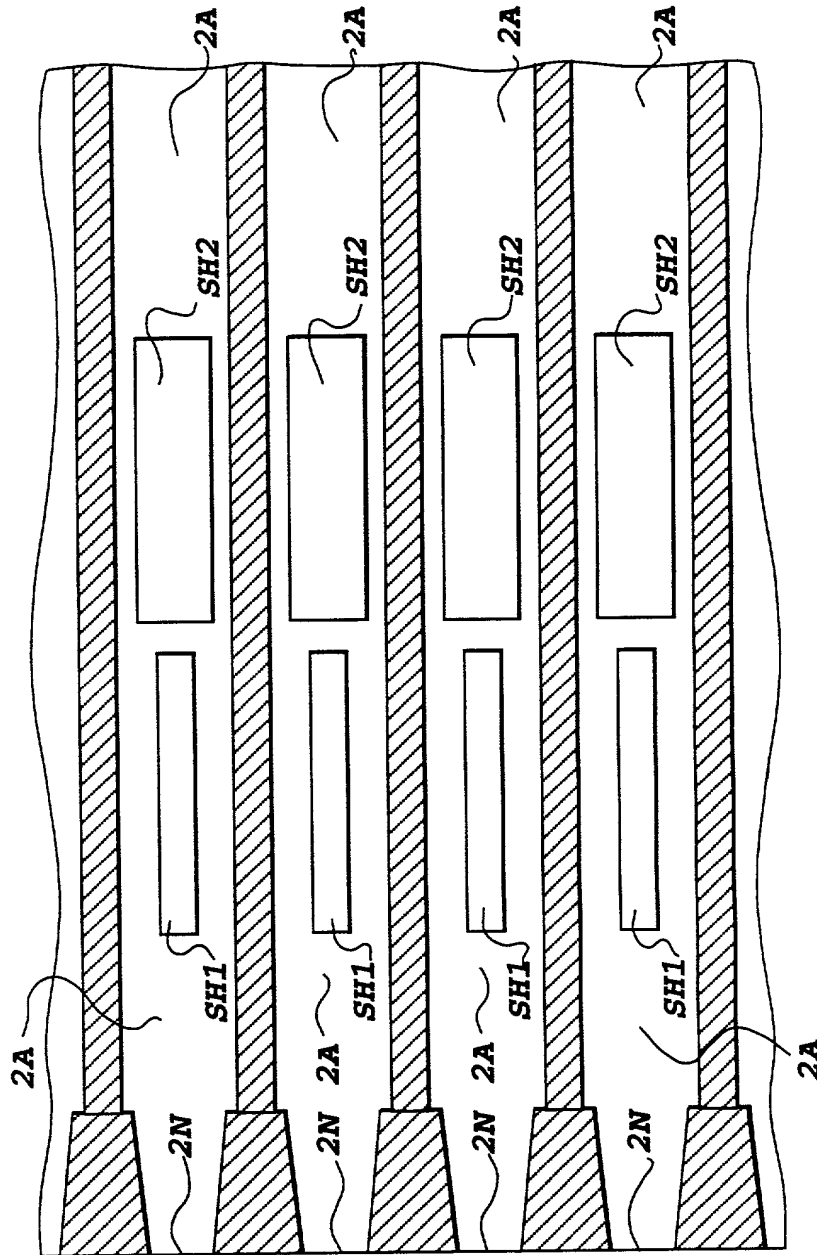


FIG.4

FIG. 5

FIG. 5A

FIG. 5B

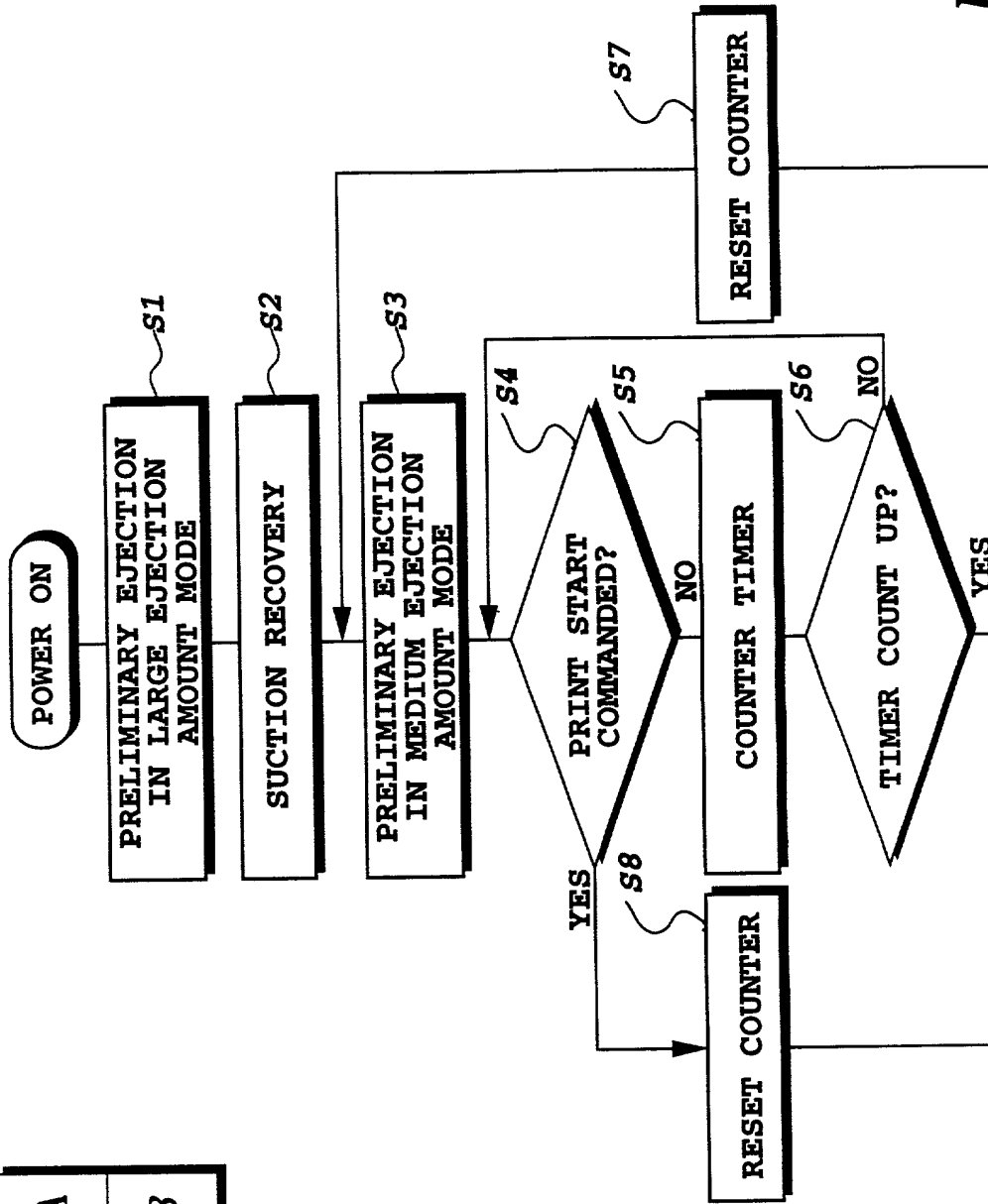


FIG. 5A

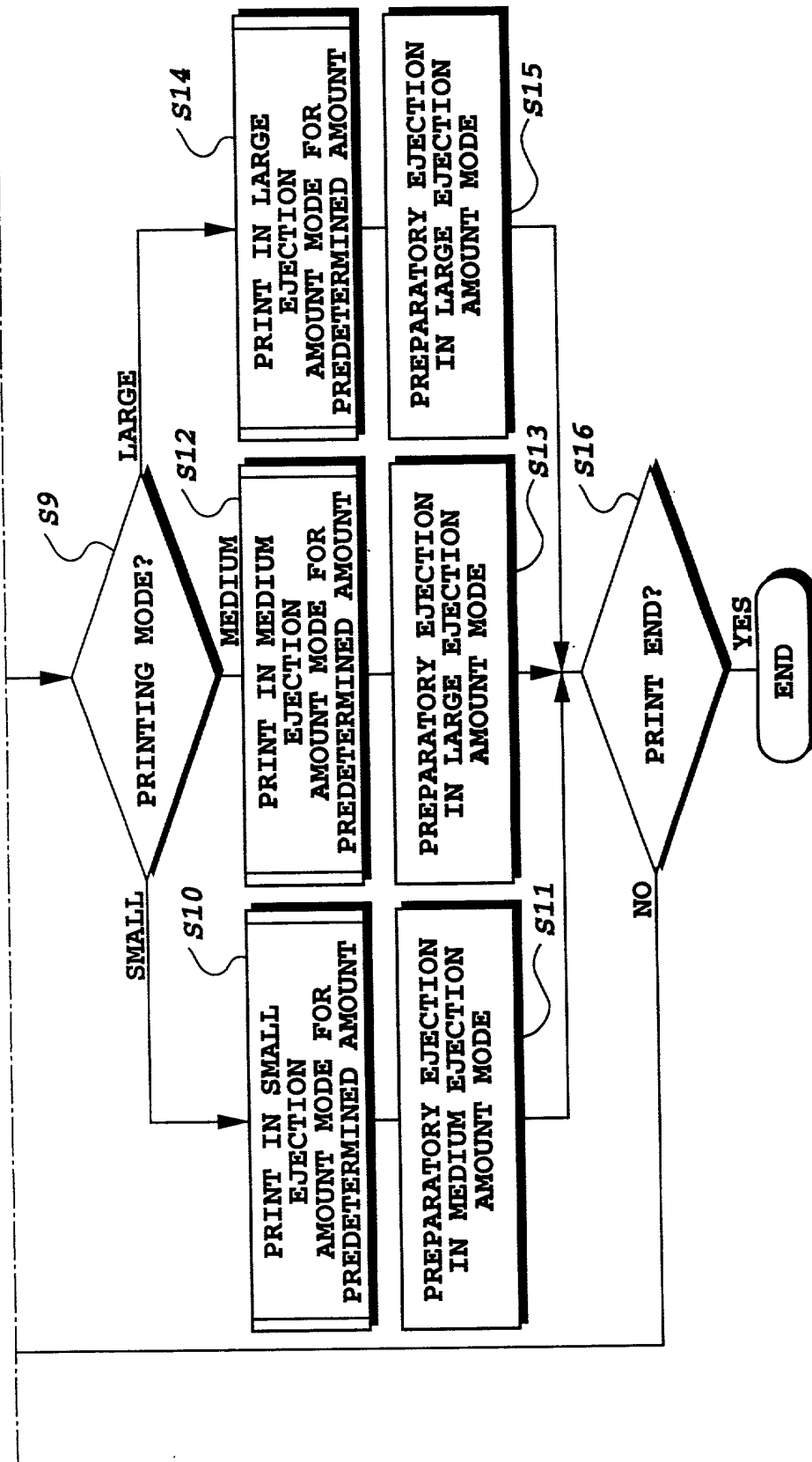


FIG5B

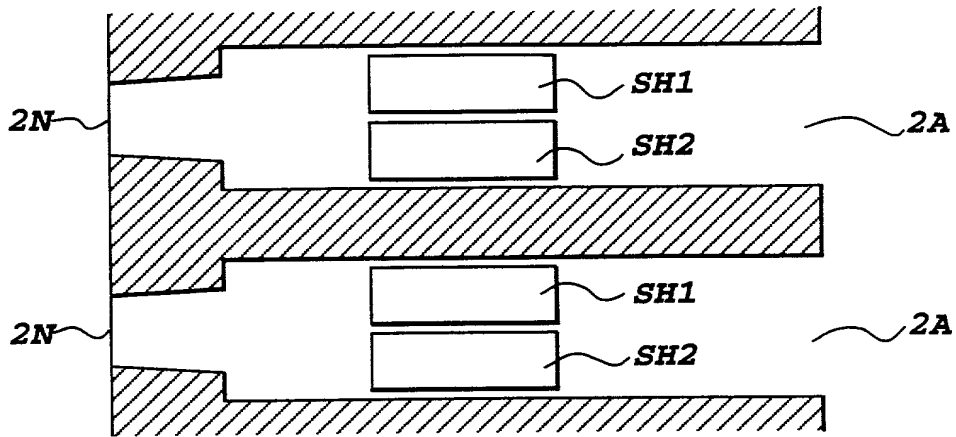


FIG. 6A

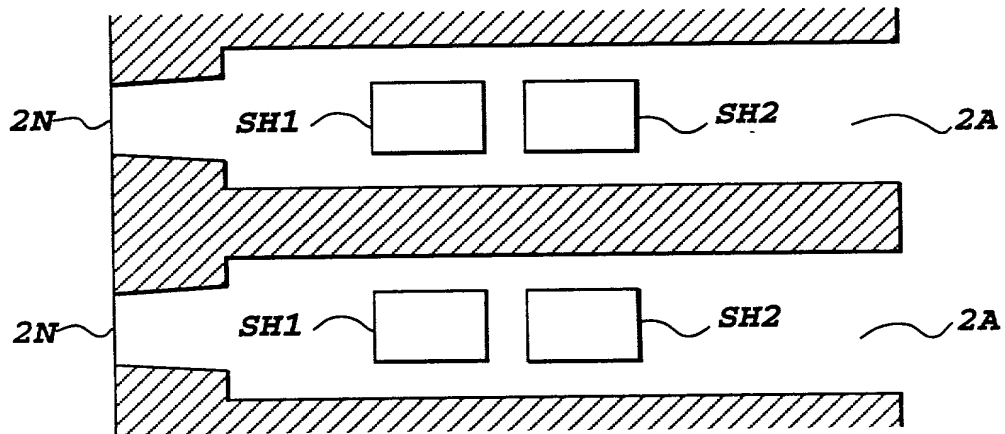


FIG. 6B

FIG. 7

FIG. 7A

FIG. 7B

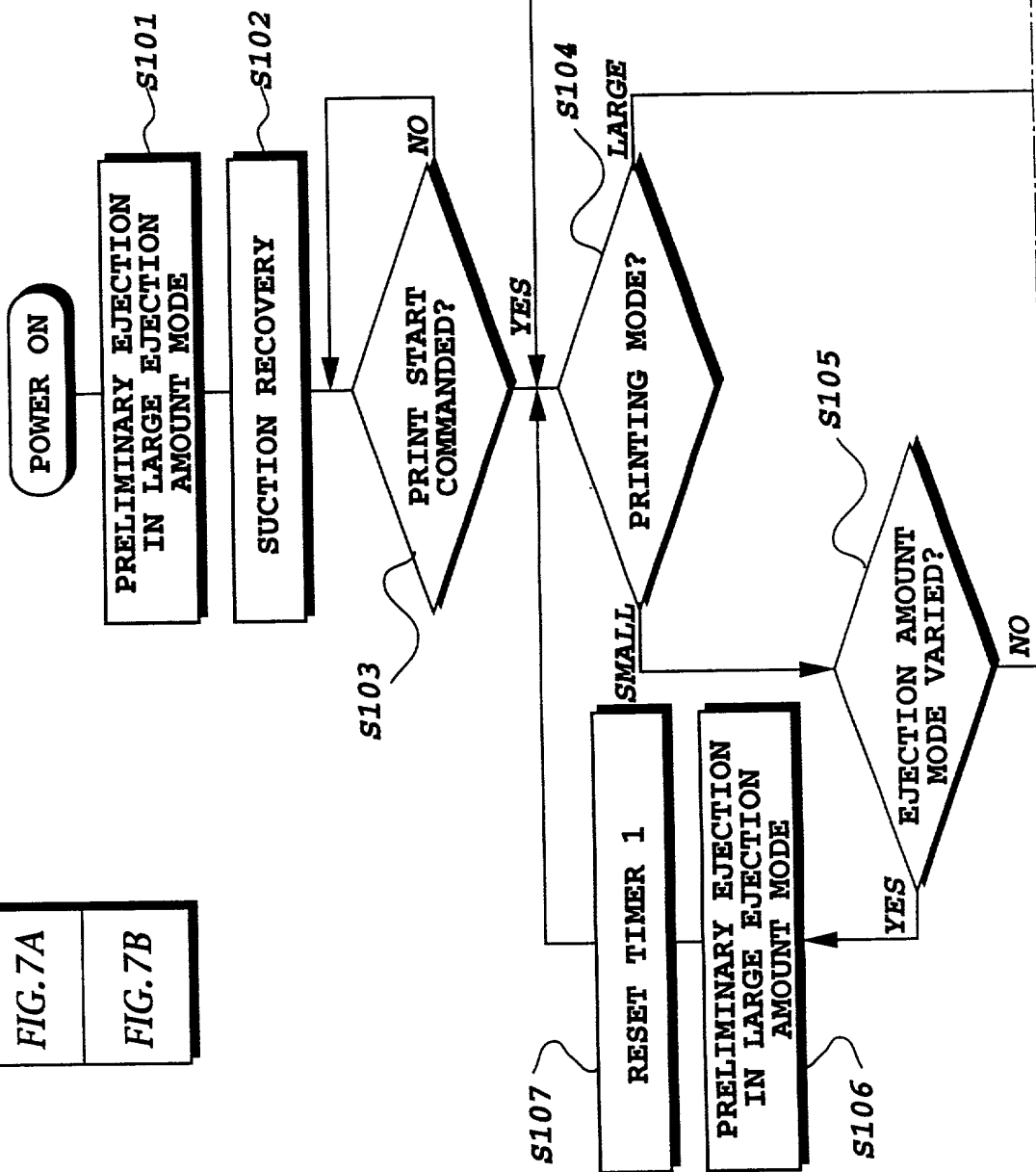


FIG. 7A

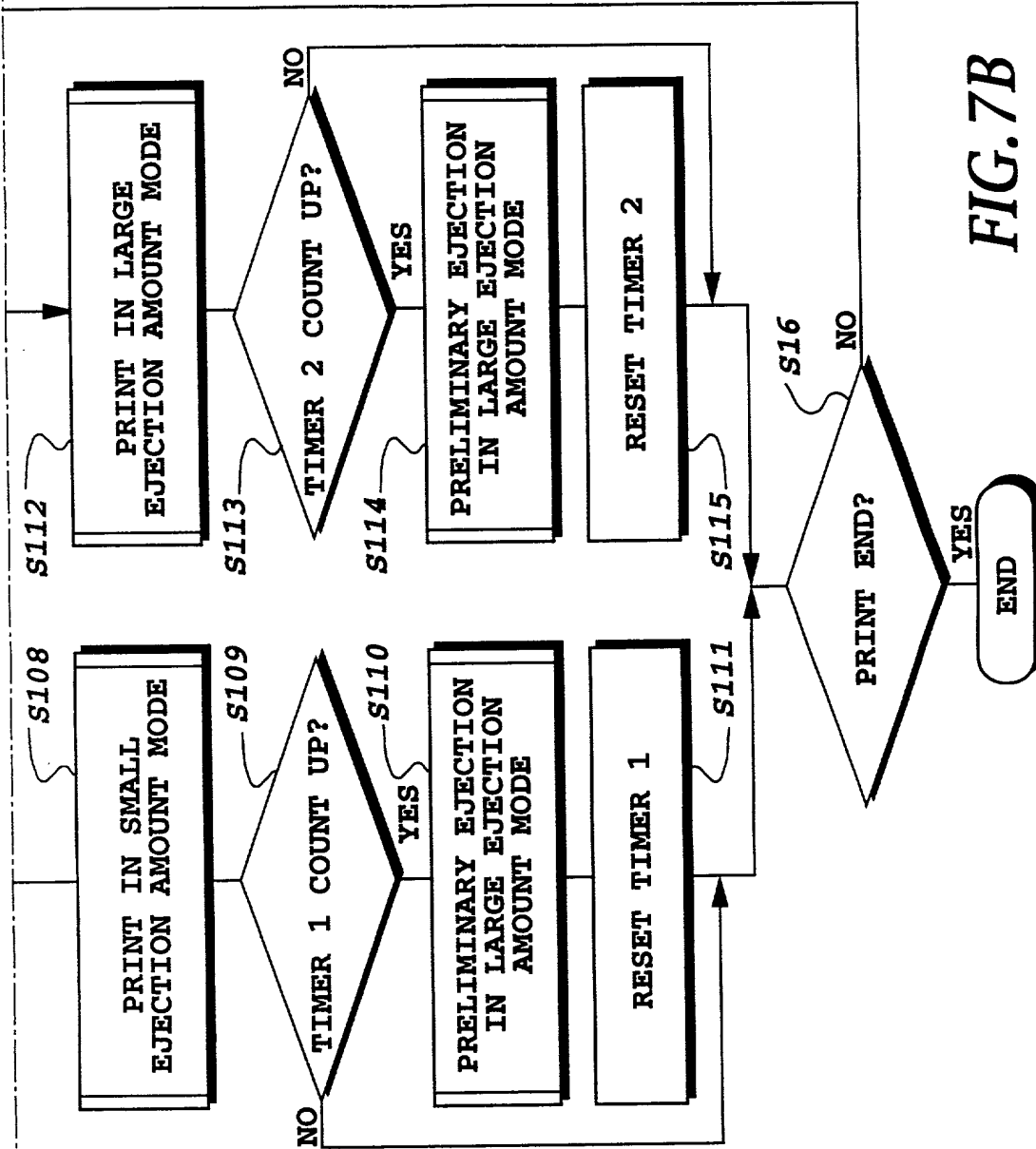


FIG. 7B

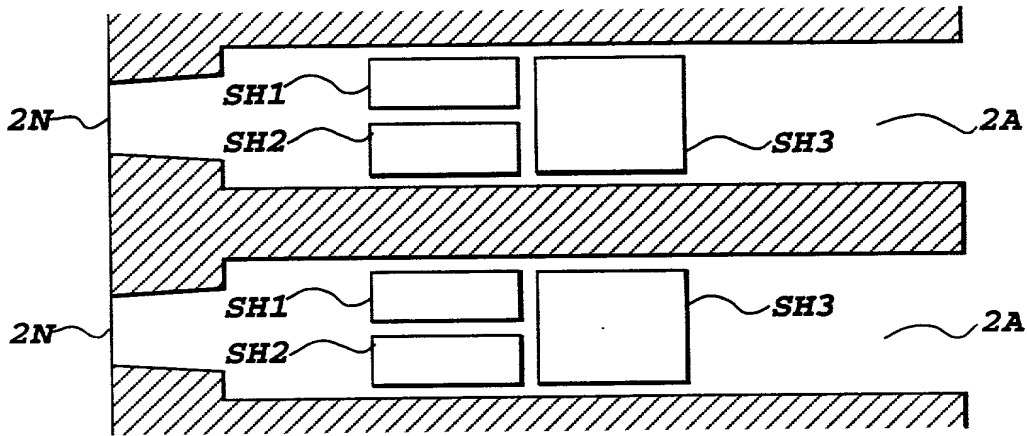


FIG.8

11/81

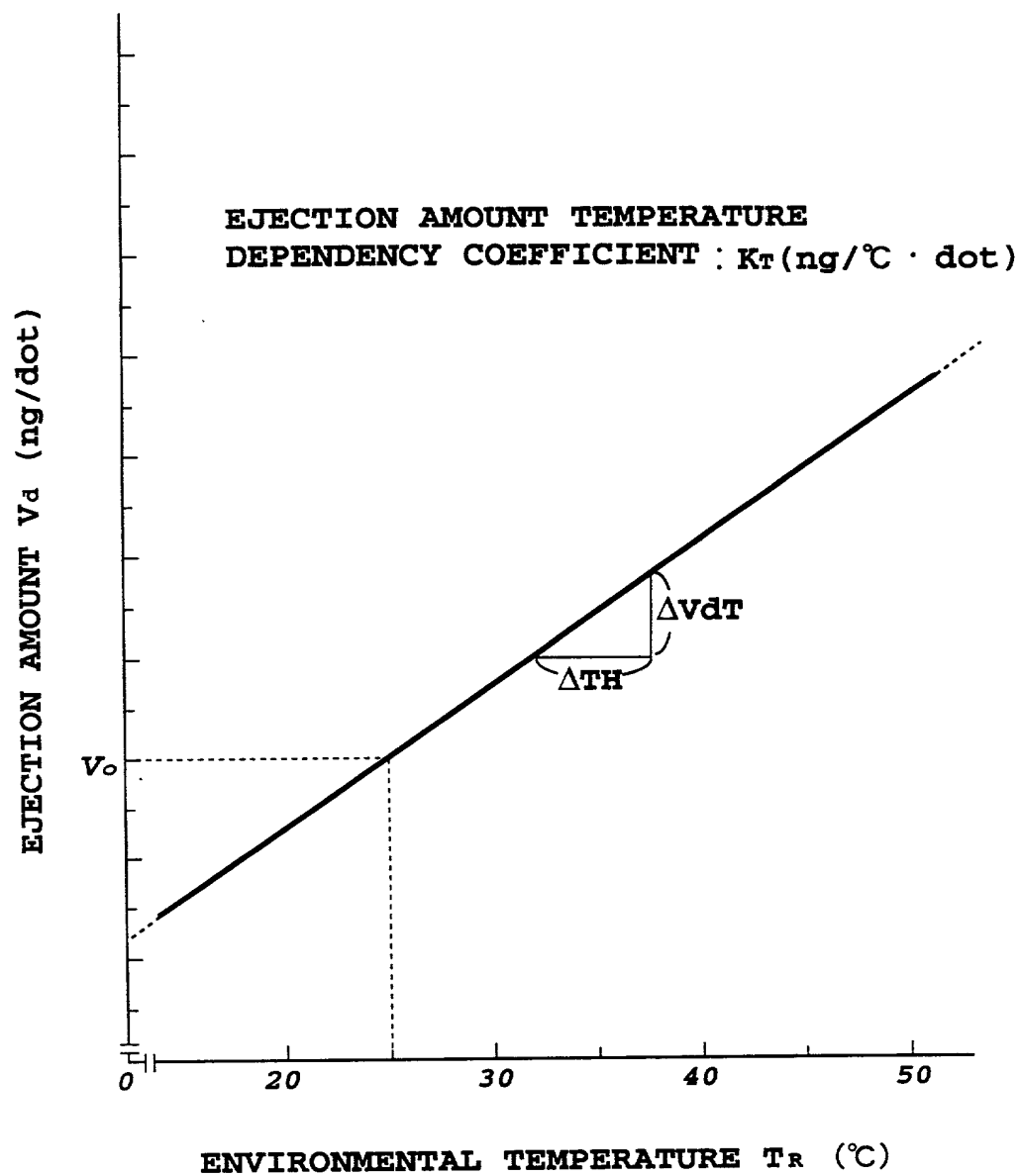


FIG.9

12/81

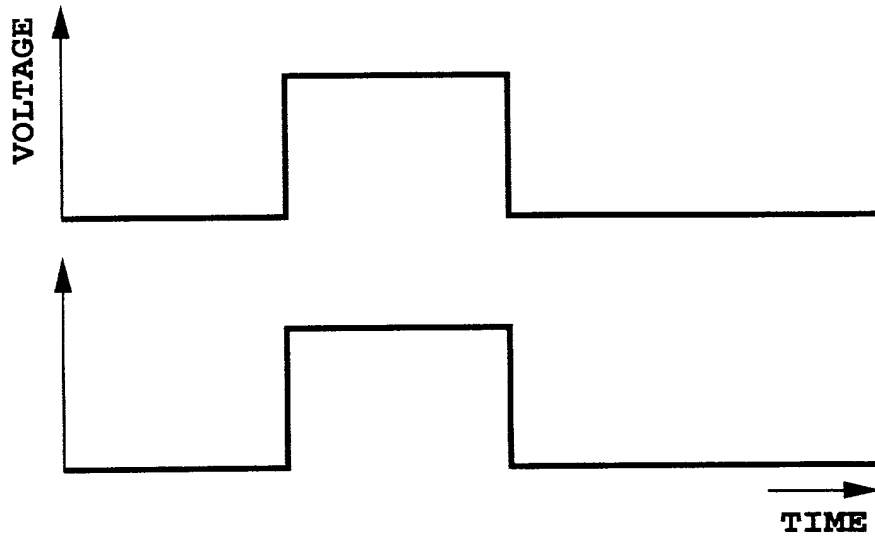


FIG.10A

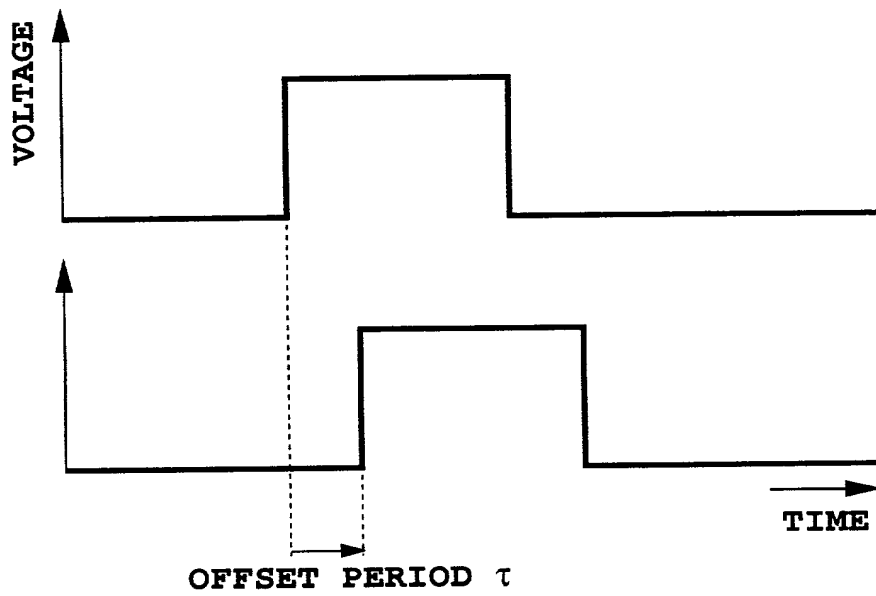


FIG.10B

13/81

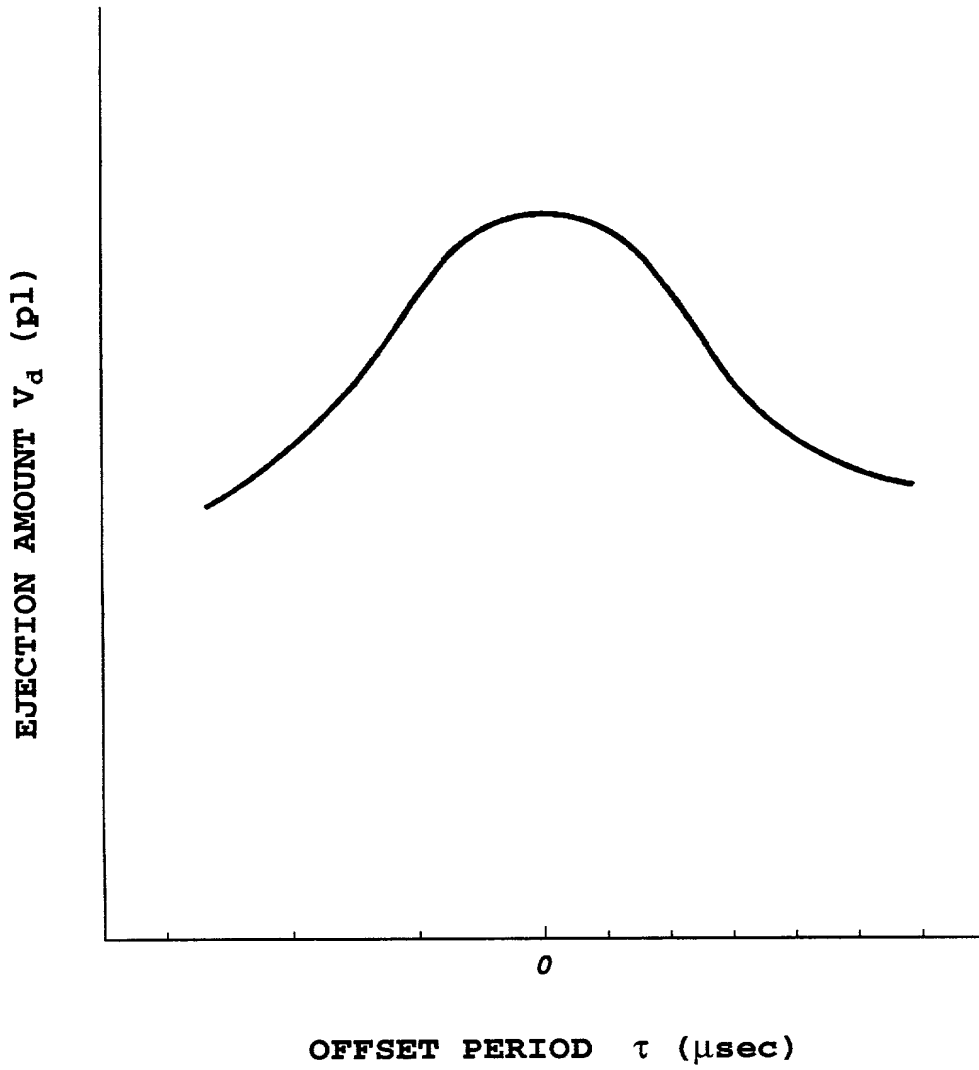


FIG.11

TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
HEAD TEMPERATURE T_h (°C)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE ~ LESS THAN 47	47 OR MORE ~ LESS THAN 50	50 OR MORE ~ LESS THAN 53	53 OR MORE
OFFSET PERIOD τ (μ sec)	0	0.8	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	4.0

FIG.12

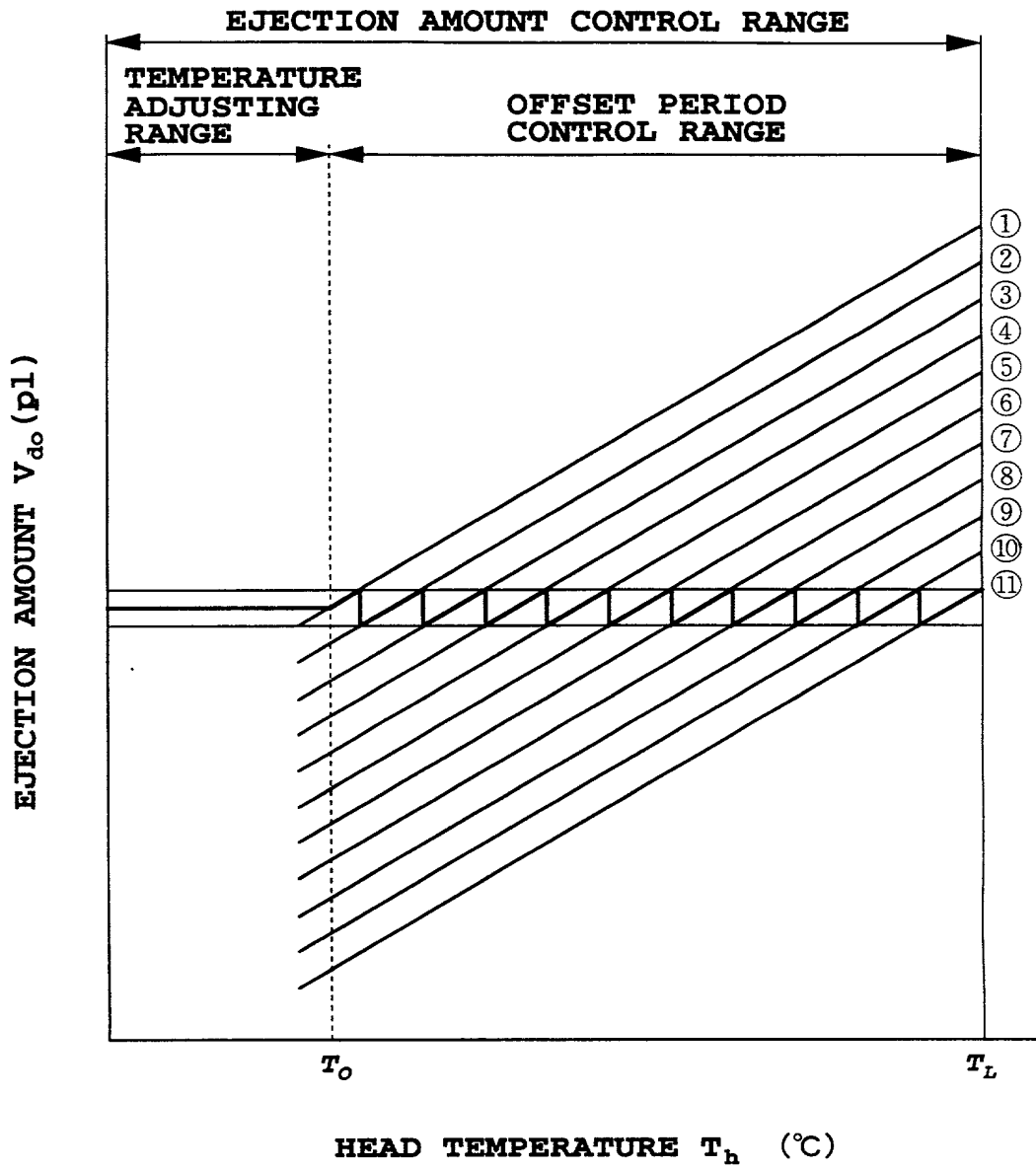


FIG.13

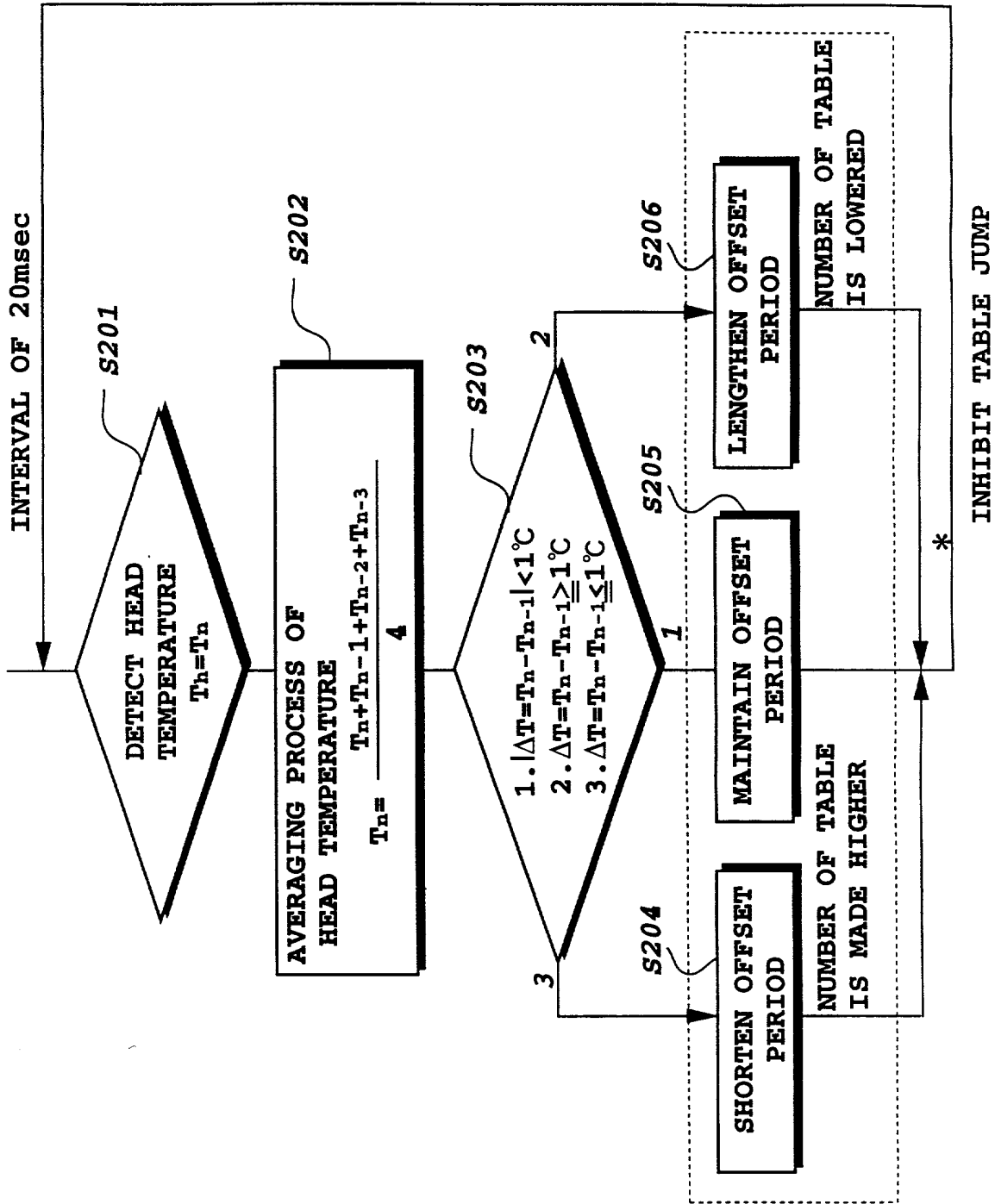


FIG. 14

TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
HEAD TEMPERATURE T_h ($^{\circ}\text{C}$)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE ~ LESS THAN 47	47 OR MORE ~ LESS THAN 50	50 OR MORE ~ LESS THAN 53	53 OR MORE
OFFSET PERIOD τ (μsec)	0	-0.8	-1.2	-1.5	-1.8	-2.1	-2.4	-2.7	-3.0	-3.4	-4.0

FIG.15

TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧
HEAD TEMPERATURE T_h ($^{\circ}\text{C}$)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE
OFFSET PERIOD τ (μsec)	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3

FIG.16

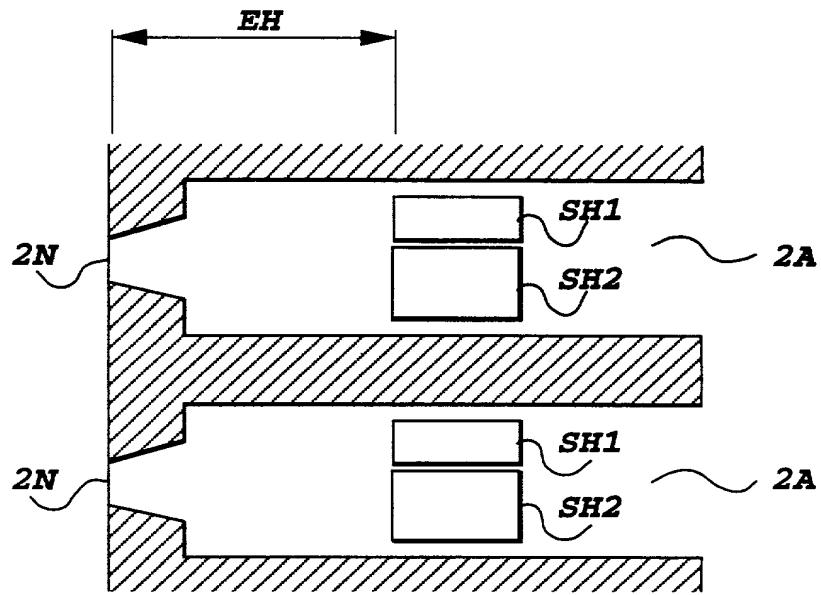


FIG.17

20/81

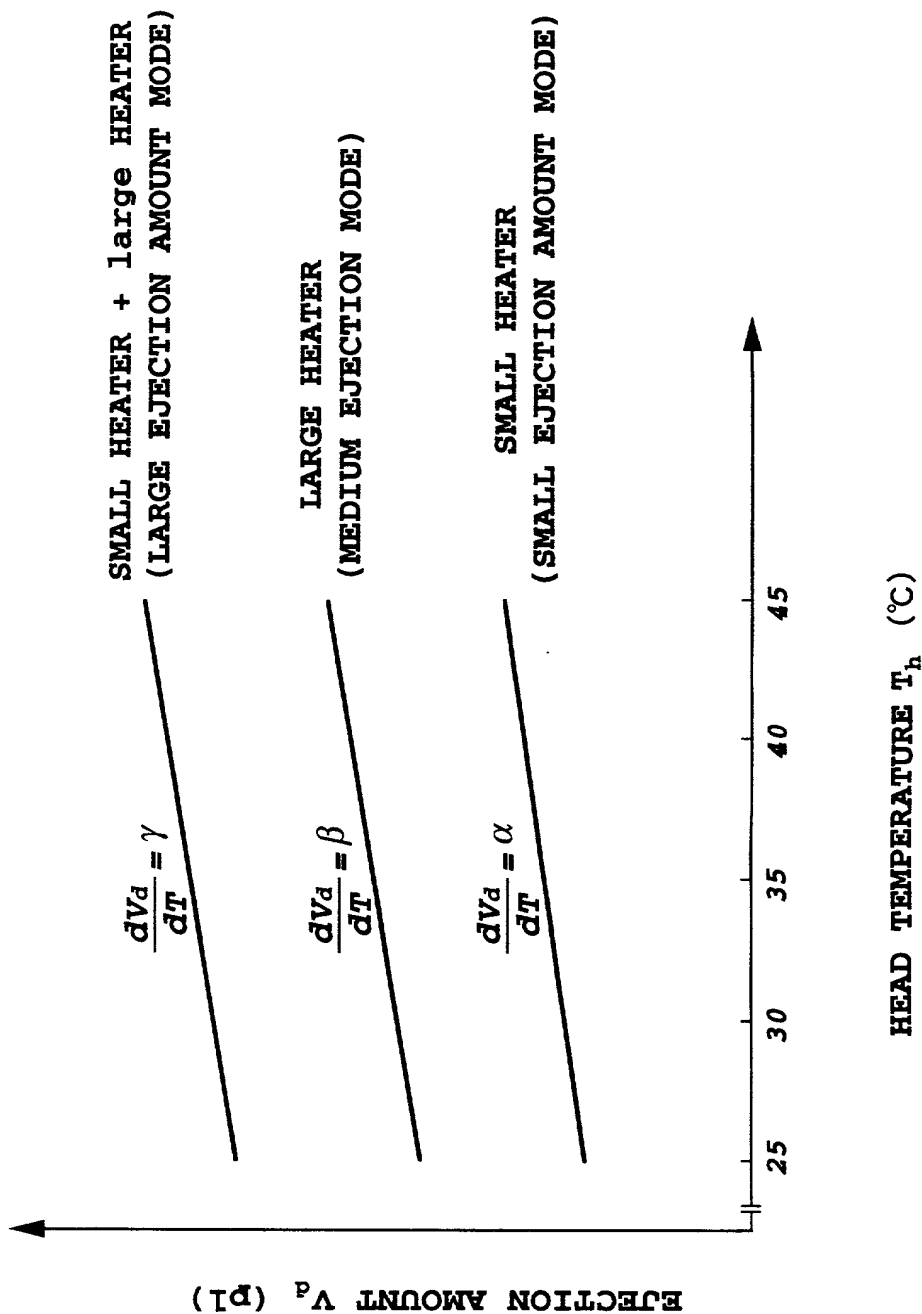


FIG.18

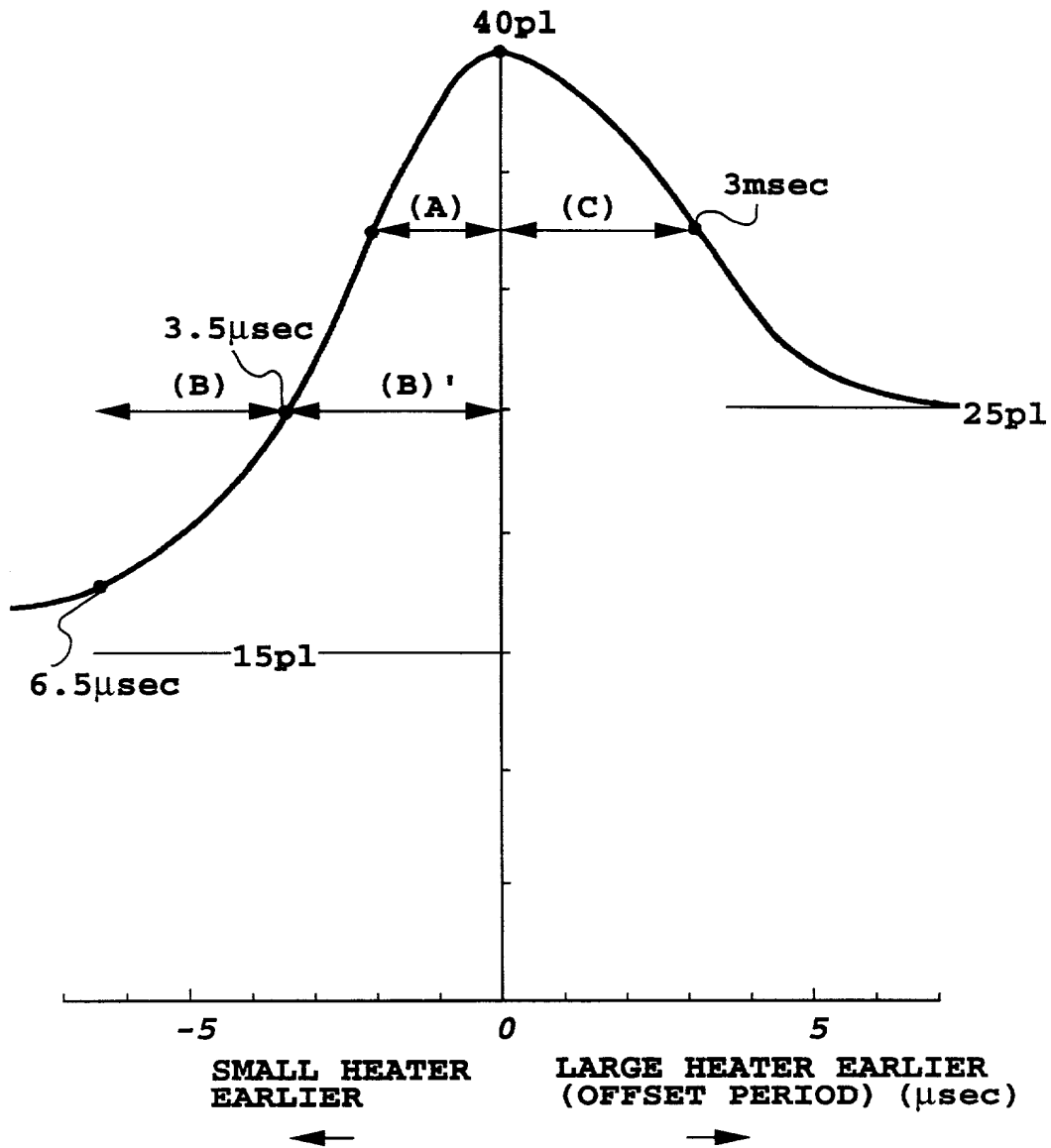


FIG.19

LARGE EJECTION AMOUNT MODE (40pl/dot)

TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
HEAD TEMPERATURE T_h (°C)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE ~ LESS THAN 47	47 OR MORE ~ LESS THAN 50	50 OR MORE
OFFSET PERIOD τ (μsec)	0	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0

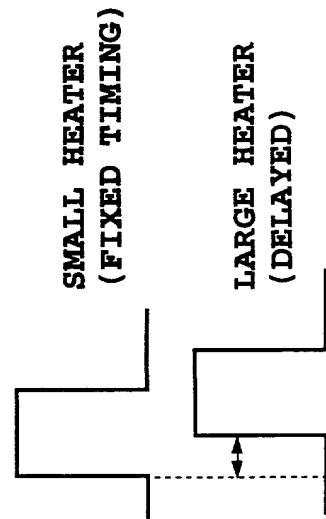


FIG. 20A

MEDIUM EJECTION AMOUNT MODE (25p1/dot)

TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
HEAD TEMPERATURE T _h (°C)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE ~ LESS THAN 47	47 OR MORE ~ LESS THAN 50	50 OR MORE
OFFSET PERIOD τ(μsec)	3.5	3.8	4.1	4.4	4.7	5.0	5.3	5.7	6.1	6.5

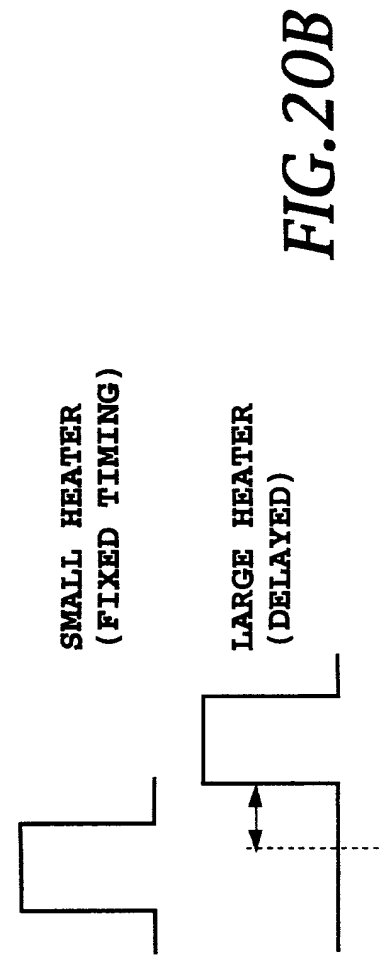


FIG.20B

LARGE EJECTION AMOUNT MODE (40p1/dot)									
TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨
HEAD TEMPERATURE T_h (°C)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE ~ LESS THAN 47	47 OR MORE ~ LESS THAN 50
OFFSET PERIOD τ (μ sec)	0	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7
									50 OR MORE
									3.0

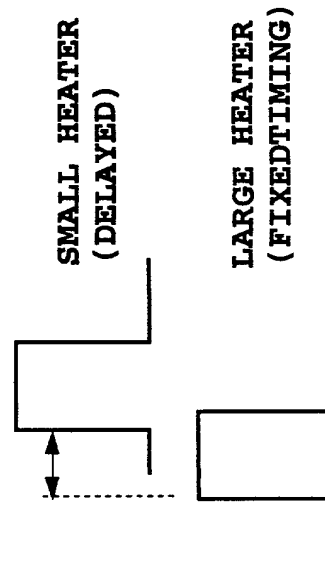


FIG.21A

MEDIUM EJECTION AMOUNT MODE (25pl/dot)

TABLE NO.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
HEAD TEMPERATURE T _h (°C)	LESS THAN 26	26 OR MORE ~ LESS THAN 29	29 OR MORE ~ LESS THAN 32	32 OR MORE ~ LESS THAN 35	35 OR MORE ~ LESS THAN 38	38 OR MORE ~ LESS THAN 41	41 OR MORE ~ LESS THAN 44	44 OR MORE ~ LESS THAN 47	47 OR MORE ~ LESS THAN 50	50 OR MORE
OFFSET PERIOD τ (μsec)	3.5	3.8	4.1	4.4	4.7	5.0	5.3	5.7	6.1	6.5

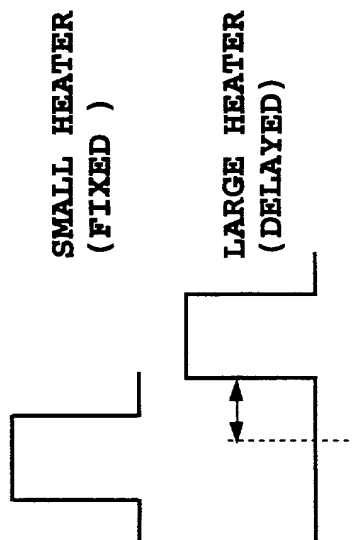


FIG.21B

SH1: SMALL HEATER
SH2: LARGE HEATER

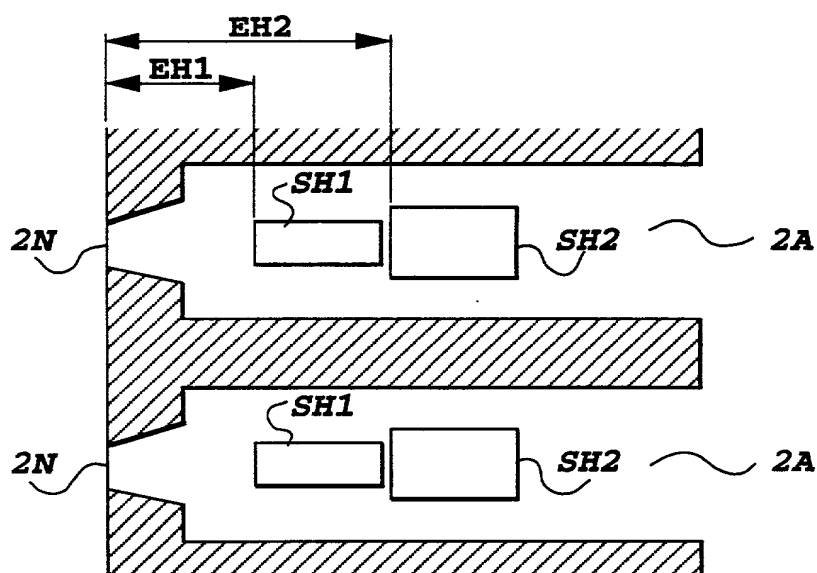


FIG.22

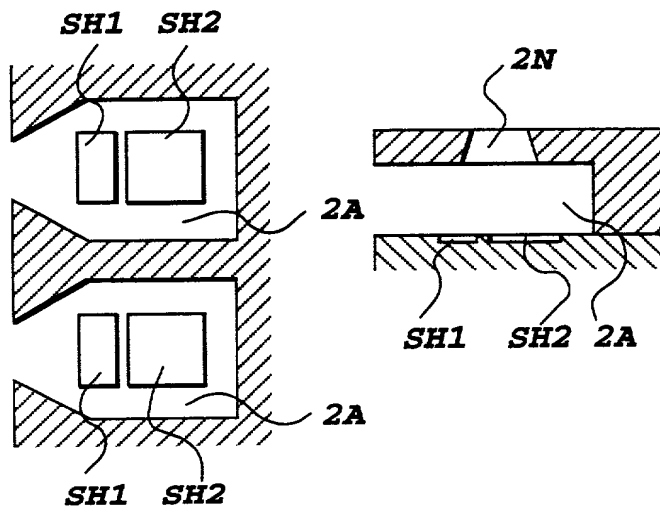


FIG. 23

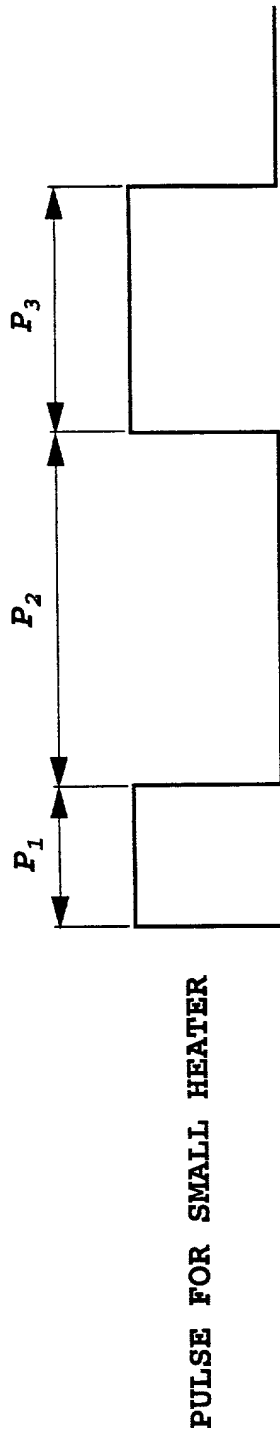


FIG.24A

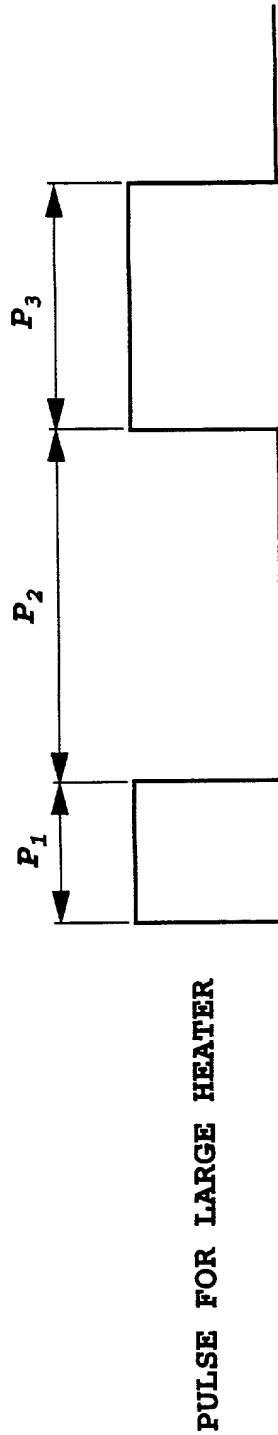


FIG.24B

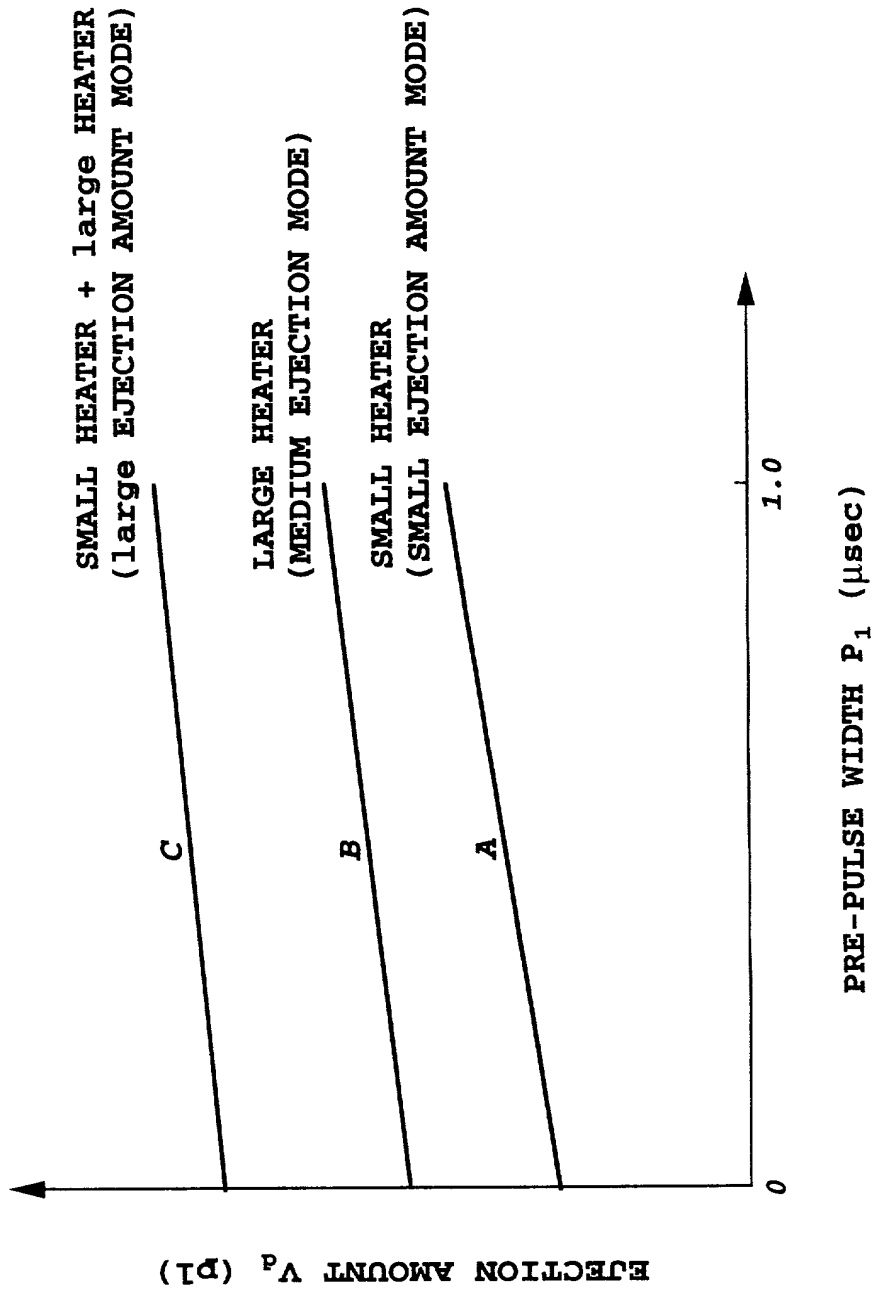


FIG.25

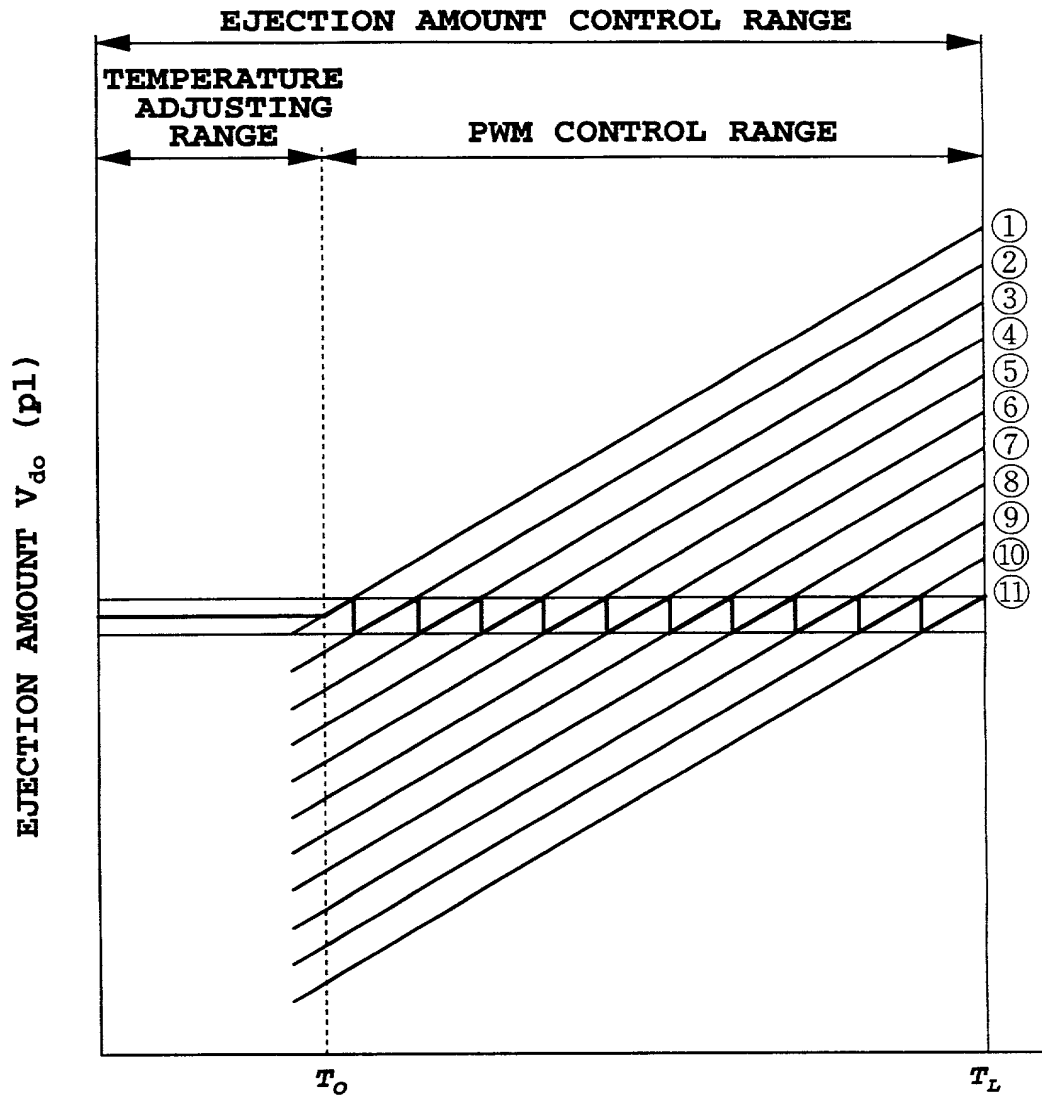


FIG.26

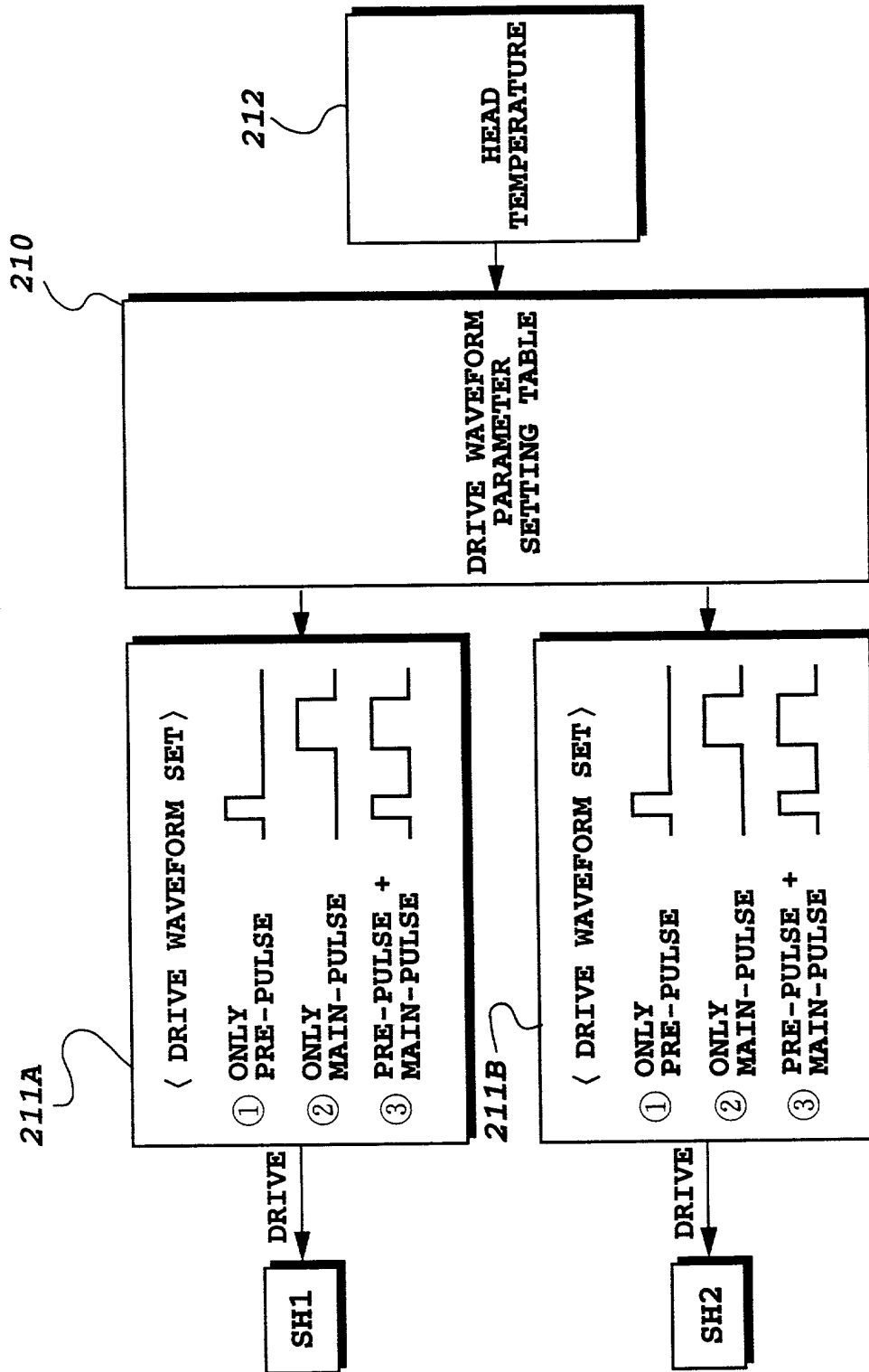


FIG.27

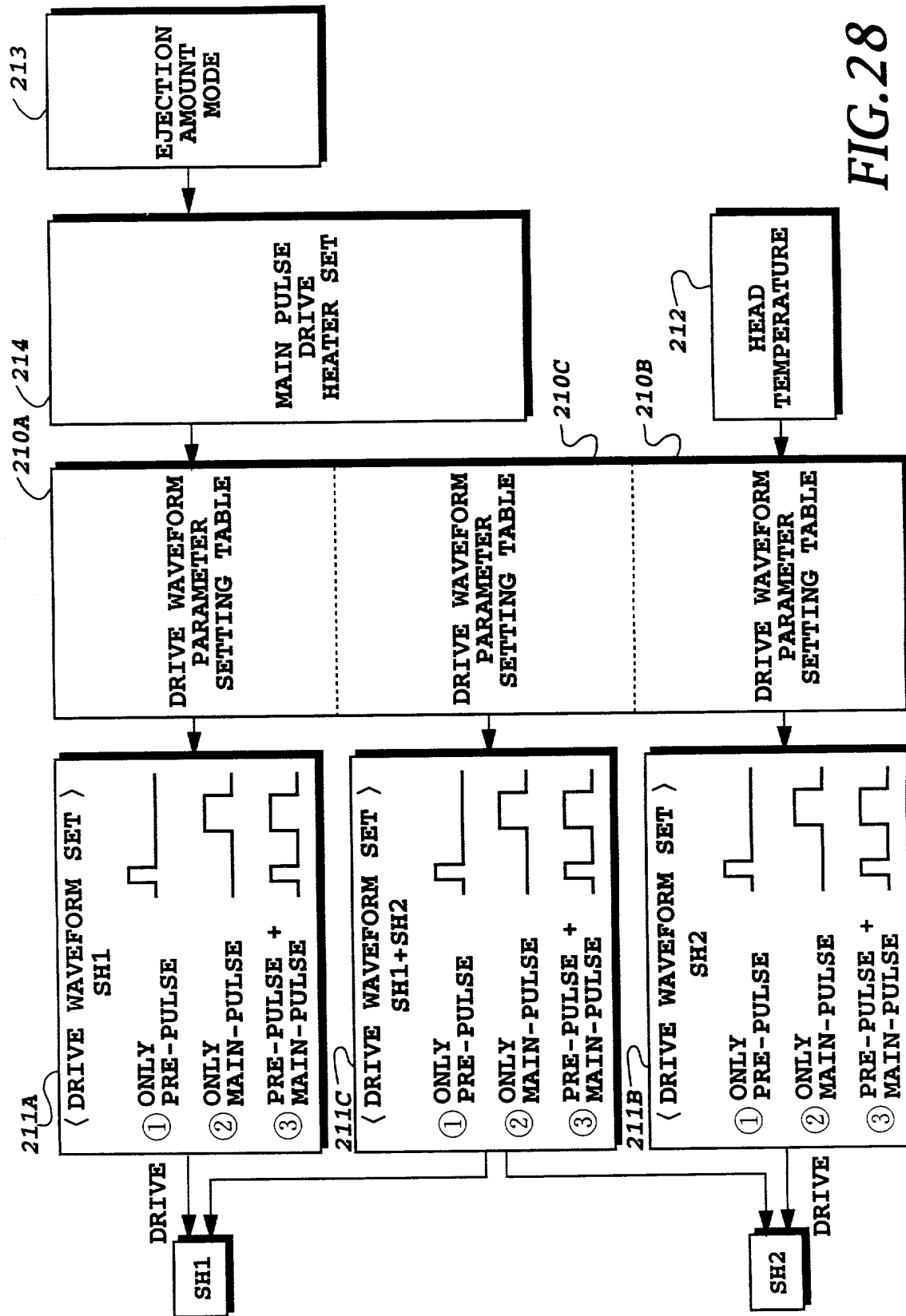


FIG. 28

213	214	EJECTION AMOUNT MODE	MAIN HEAT PULSE DRIVEN HEATER	PRE-HEAD PULSE DRIVEN HEATER
		SMALL	SH1	SH1
				SH2
				SH1+SH2
		MEDIUM	SH2	SH1
				SH2
				SH1+SH2
		LARGE	SH1+SH2	SH1
				SH2
				SH1+SH2

FIG.29

P₁ TABLE FOR SMALL EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER PRE-PULSE (μsec)	1.0	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
LARGE HEATER PRE-PULSE (μsec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(15pl)

FIG.30A

P₁ TABLE FOR MEDIUM EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	~60
SMALL HEATER PRE-PULSE (μsec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LARGE HEATER PRE-PULSE (μsec)	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0	0	0	0	0	0	0

(25p1)

FIG.30B

P₁ TABLE FOR LARGE EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER PRE-PULSE (μsec)	1.0	0.950	0.900	0.850	0.800	0.750	0.700	0.650	0.600	0.550	0.500	0.450	0.400	0.350	0.300	0.250	0.200	0.150	0.10
LARGE HEATER PRE-PULSE (μsec)	1.0	0.950	0.900	0.850	0.800	0.750	0.700	0.650	0.600	0.550	0.500	0.450	0.400	0.350	0.300	0.250	0.200	0.150	0.10

(40pl)

FIG.30C

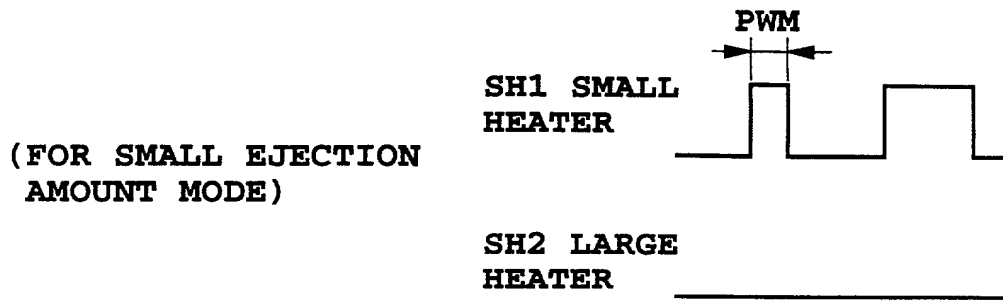


FIG.31A

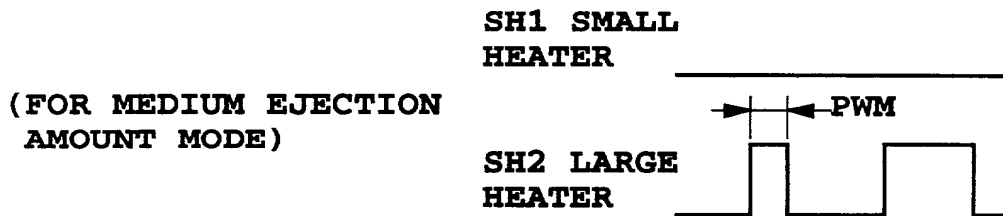


FIG.31B

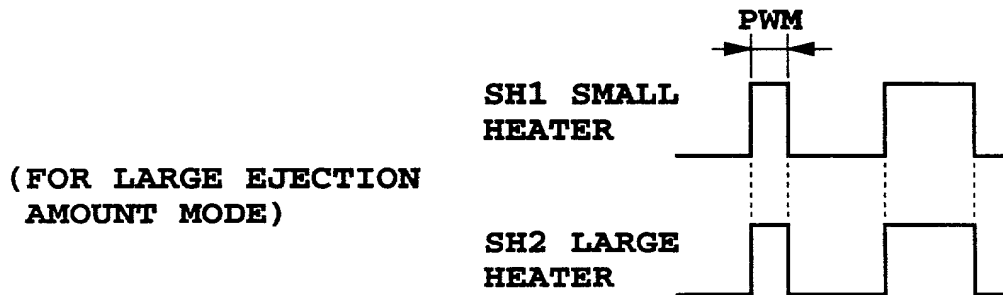


FIG.31C

P₁ TABLE FOR SMALL EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER PRE-PULSE (μsec)	1.0	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
LARGE HEATER PRE-PULSE (μsec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(15pl)

FIG.32A

P₁ TABLE FOR MEDIUM EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER PRE-PULSE (μsec)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6	0.4	0.2	0	0	0	0
LARGE HEATER PRE-PULSE (μsec)	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0	0	0	0	0	0	0

(25p1)

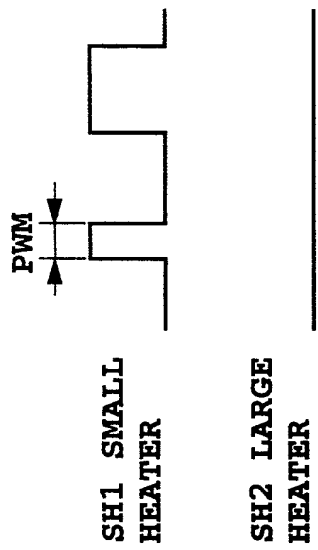
FIG.32B

P₁ TABLE FOR LARGE EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	~60
SMALL HEATER PRE-PULSE (μsec)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2
LARGE HEATER PRE-PULSE (μsec)	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0	0	0	0	0	0	0

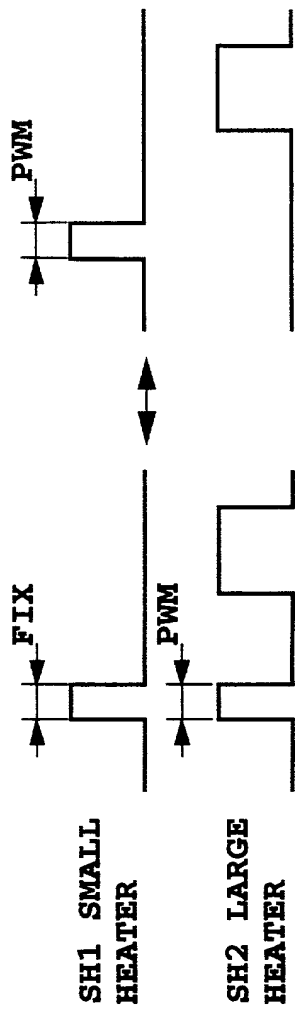
(40p1)

FIG.32C



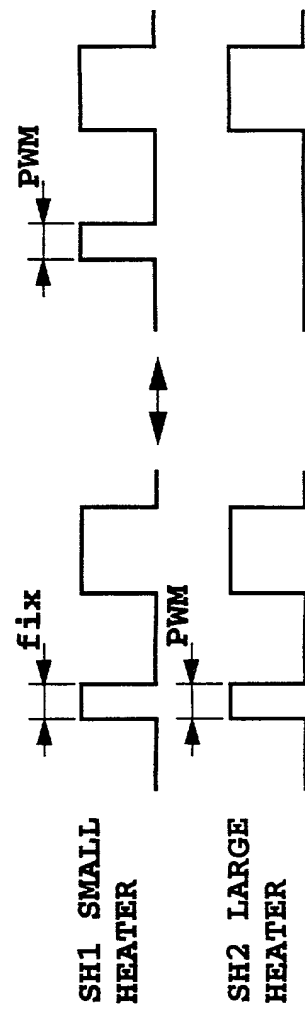
(FOR SMALL EJECTION
AMOUNT MODE)

FIG.33A



(FOR MEDIUM EJECTION
AMOUNT MODE)

FIG.33B



(FOR LARGE EJECTION
AMOUNT MODE)

FIG.33C

FIG. 34A

(15p1)

P₁ TABLE FOR MEDIUM EJECTION AMOUNT MODE
(FOR LOW TEMPERATURE)

HEAD T TEMPERATURE (°C)	~16	~18	~20	~22	~24	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	50~
SMALL HEATER PRE-PULSE (μsec)	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.6	0.4	0.2	0	0	0	0
LARGE HEATER PRE-PULSE (μsec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(25p1)

FIG.34B

P₁ TABLE FOR LARGE EJECTION AMOUNT MODE
(FOR LOW TEMPERATURE)

HEAD T TEMPERATURE (°C)	~16	~18	~20	~22	~24	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	50~
SMALL HEATER PRE-PULSE (μsec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LARGE HEATER PRE-PULSE (μsec)	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2

(40p1)

FIG.35A

**P₁ TABLE FOR LARGE EJECTION AMOUNT MODE
(FOR HIGH TEMPERATURE)**

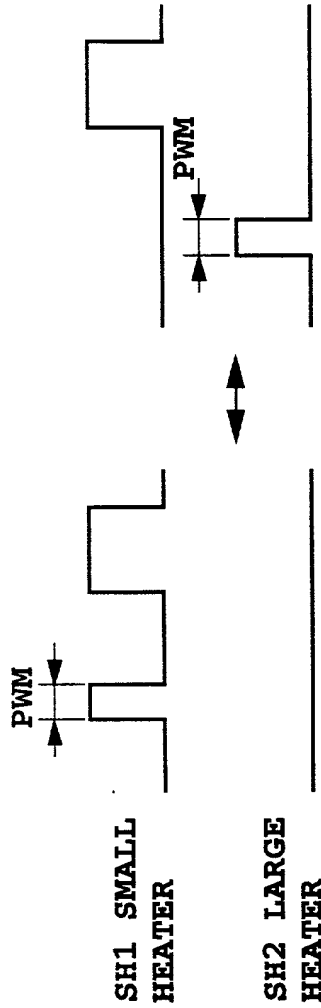
HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER PRE-PULSE (μsec)	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0
LARGE HEATER PRE-PULSE (μsec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(40p1)

FIG.35B

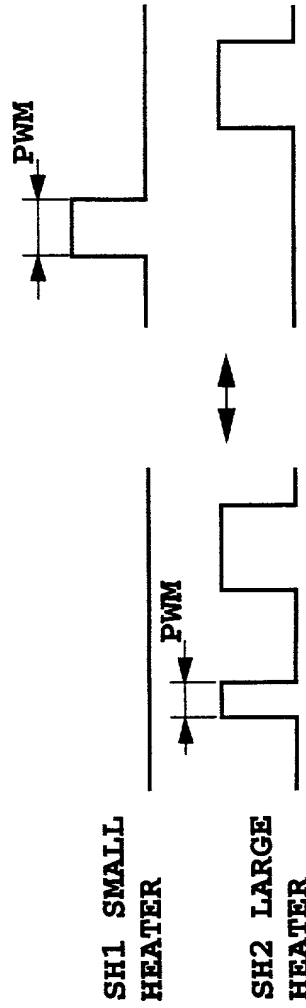
(FOR HIGH TEMPERATURE)

(FOR LOW TEMPERATURE)



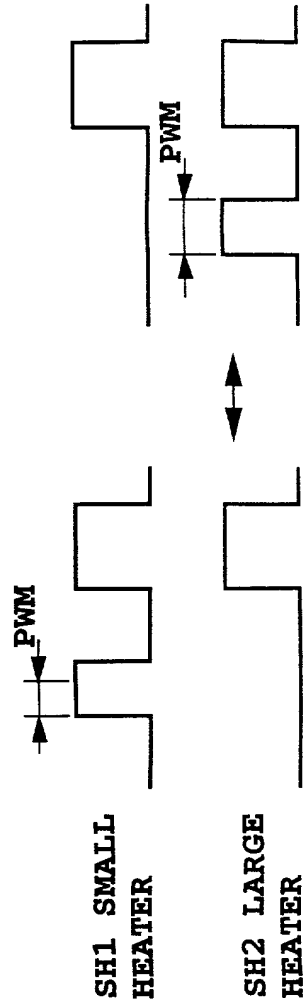
(FOR SMALL EJECTION
AMOUNT MODE)

FIG.36A



(FOR MEDIUM EJECTION
AMOUNT MODE)

FIG.36B



(FOR LARGE EJECTION
AMOUNT MODE)

FIG.36C

OFF TIME P₂ TABLE FOR SMALL EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER OFF TIME (μsec)	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.2
LARGE HEATER OFF TIME (μsec)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(15pl)

FIG.37A

OFF TIME P₂ TABLE FOR MEDIUM EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	~60
SMALL HEATER OFF TIME (μsec)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LARGE HEATER OFF TIME (μsec)	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.6	0.4

(25p1)

FIG.37B

OFF TIME P₂ TABLE FOR LARGE EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER OFF TIME (μsec)	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.2
LARGE HEATER OFF TIME (μsec)	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.2

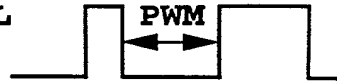
(40p1)

FIG.37C

(FOR SMALL EJECTION
AMOUNT MODE)

FIG.38A

SH1 SMALL
HEATER



SH2 LARGE
HEATER



(FOR MEDIUM EJECTION
AMOUNT MODE)

FIG.38B

SH1 SMALL
HEATER



SH2 LARGE
HEATER



(FOR LARGE EJECTION
AMOUNT MODE)

FIG.38C

SH1 SMALL
HEATER



SH2 LARGE
HEATER



OFF TIME P₂ TABLE FOR SMALL EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	~60
SMALL HEATER OFF TIME (μsec)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LARGE HEATER OFF TIME (μsec)	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.6	0.4

(15p1)

FIG.39A

OFF TIME P₂ TABLE FOR MEDIUM EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	~60
SMALL HEATER OFF TIME (μsec)	4.0	3.6	3.2	2.8	2.4	2.0	1.6	1.2	0.8	0.4	0								
LARGE HEATER OFF TIME (μsec)	-	-	-	-	-	-	-	-	-	-	-								

(25p1)

FIG.39B

OFF TIME P₂ TABLE FOR LARGE EJECTION AMOUNT MODE

HEAD T TEMPERATURE (°C)	~26	~28	~30	~32	~34	~36	~38	~40	~42	~44	~46	~48	~50	~52	~54	~56	~58	~60	60~
SMALL HEATER OFF TIME (μsec)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
LARGE HEATER OFF TIME (μsec)	4.0	3.7	3.5	3.4	3.3	3.25	3.2	3.15	3.1	3.05	3.0	2.95	2.9	2.85	2.8	2.75	2.7	2.65	2.6

(40pl)

FIG.39C

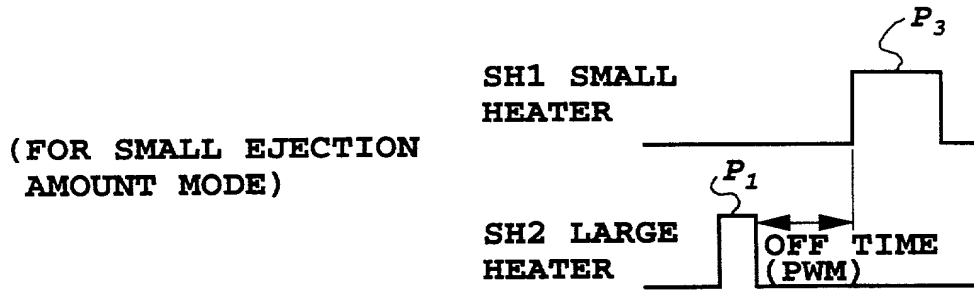


FIG.40A

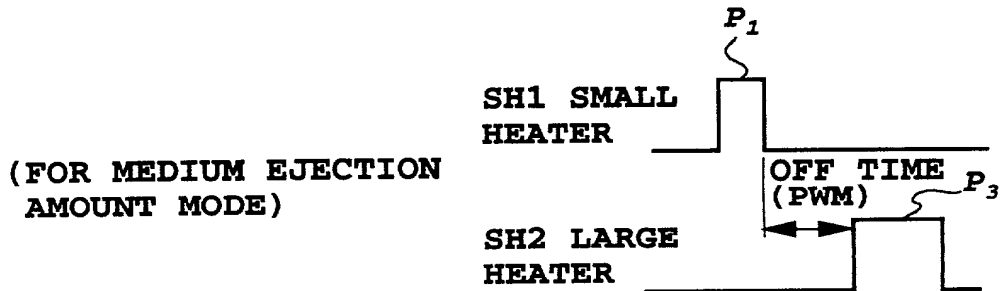


FIG.40B

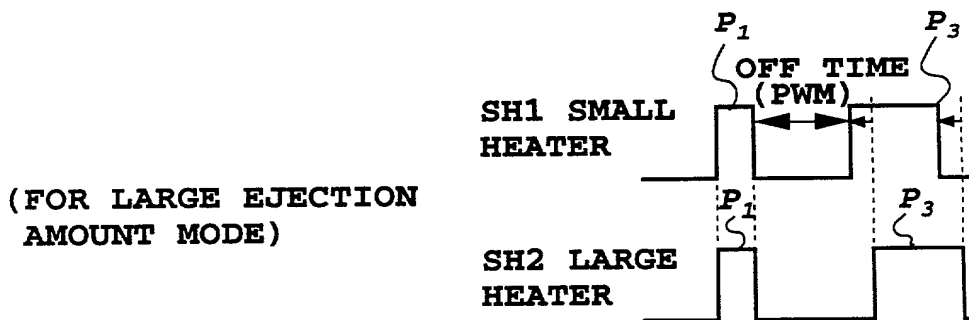


FIG.40C

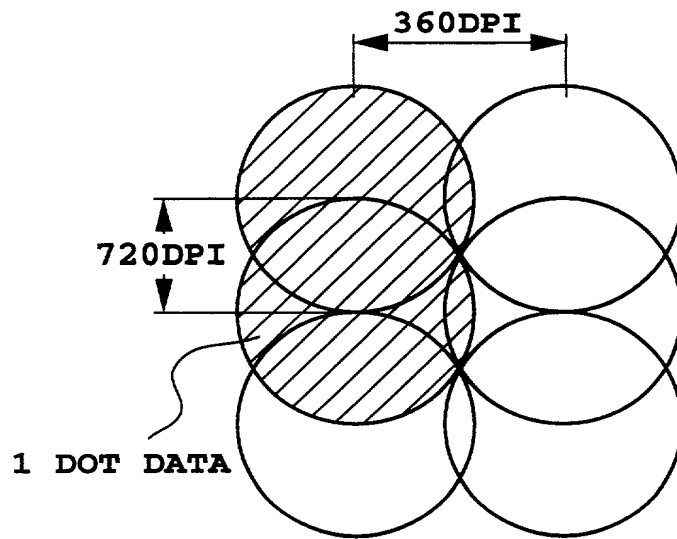


FIG.41

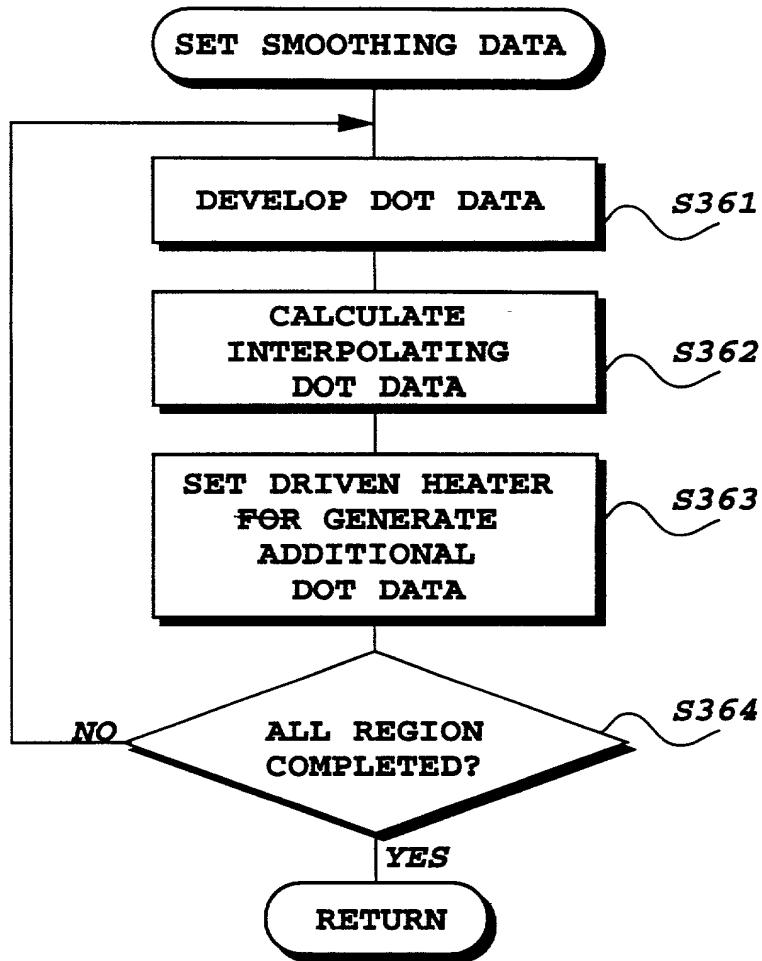


FIG. 42

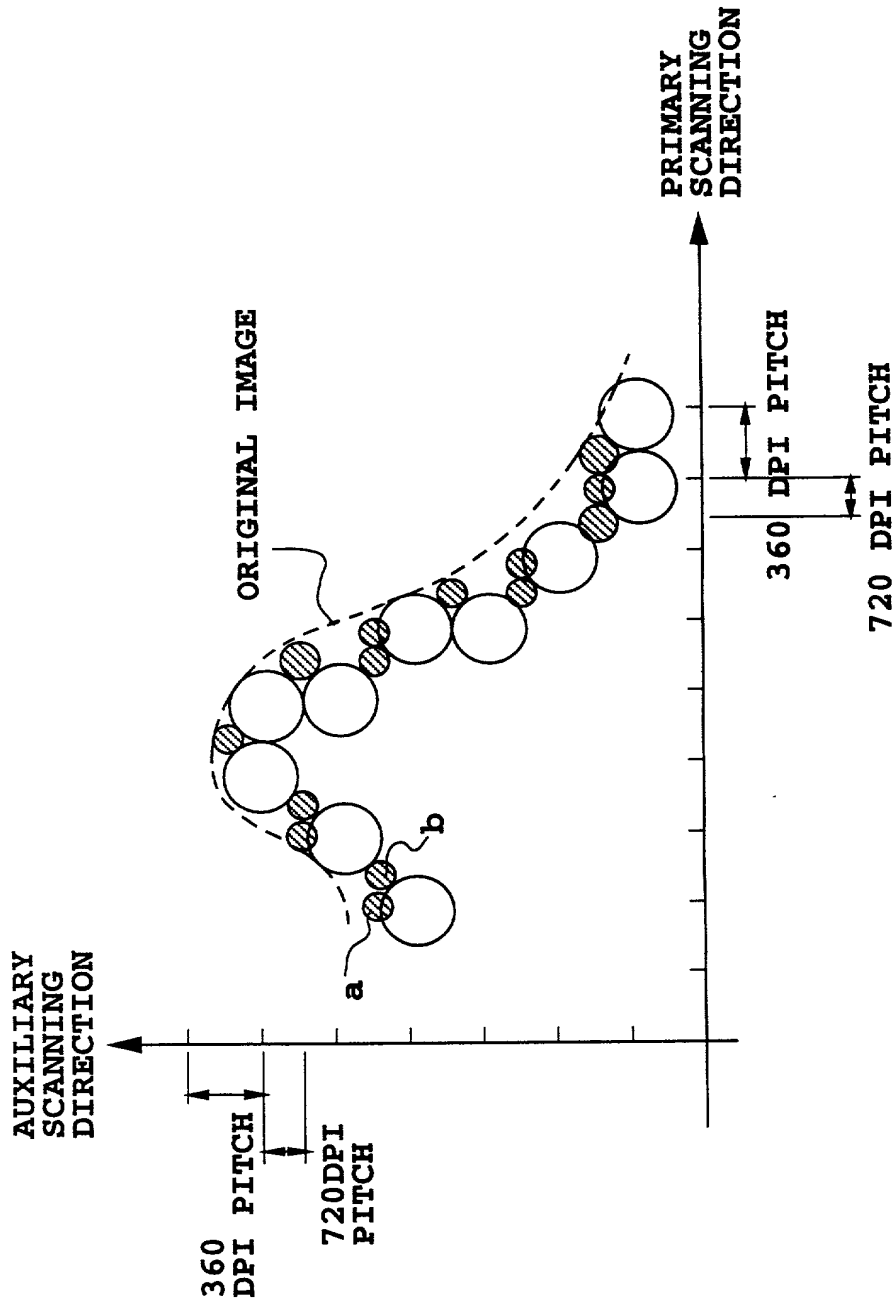


FIG.43

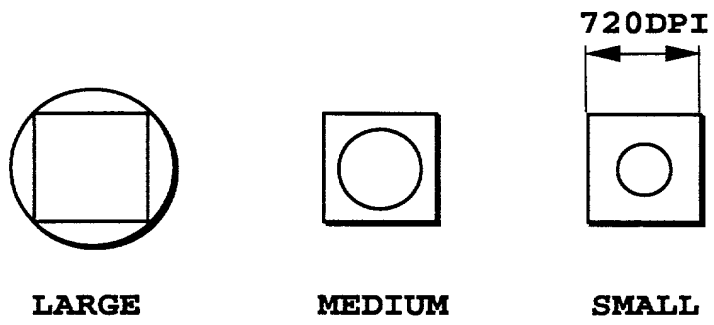


FIG.44

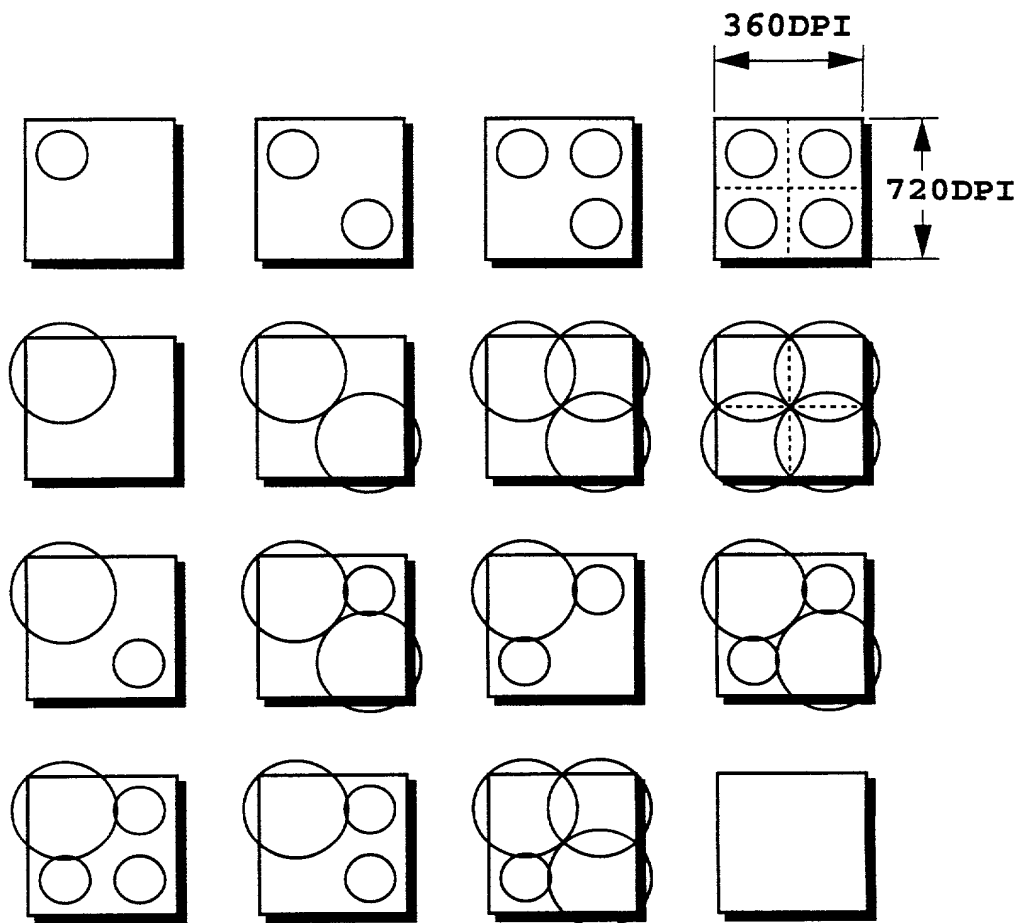


FIG.45

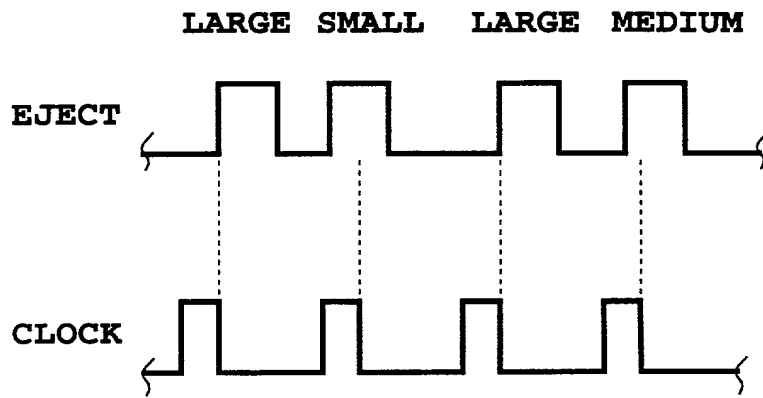


FIG.46A

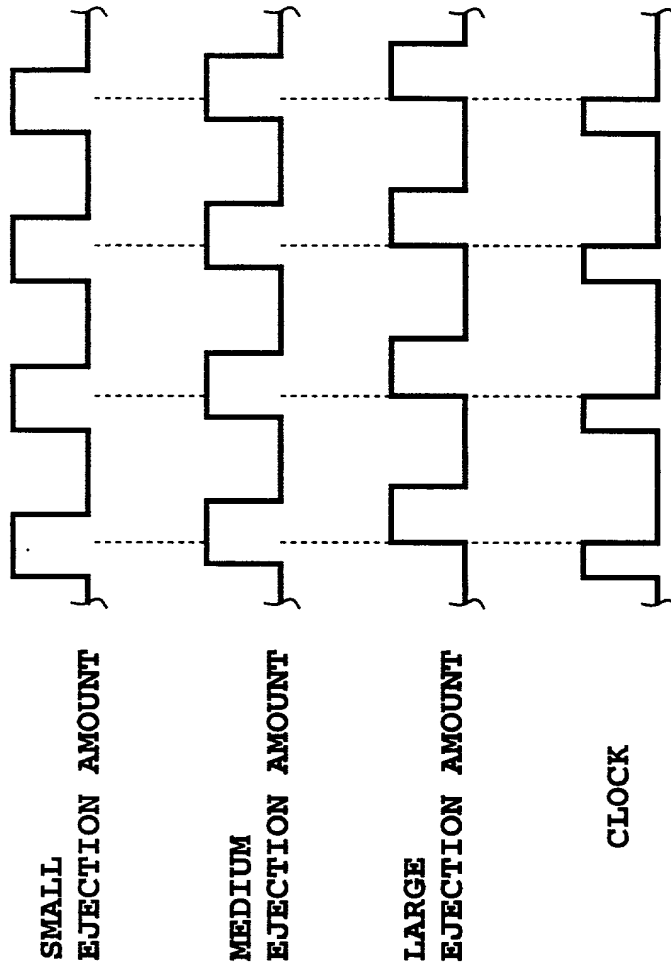


FIG. 46B

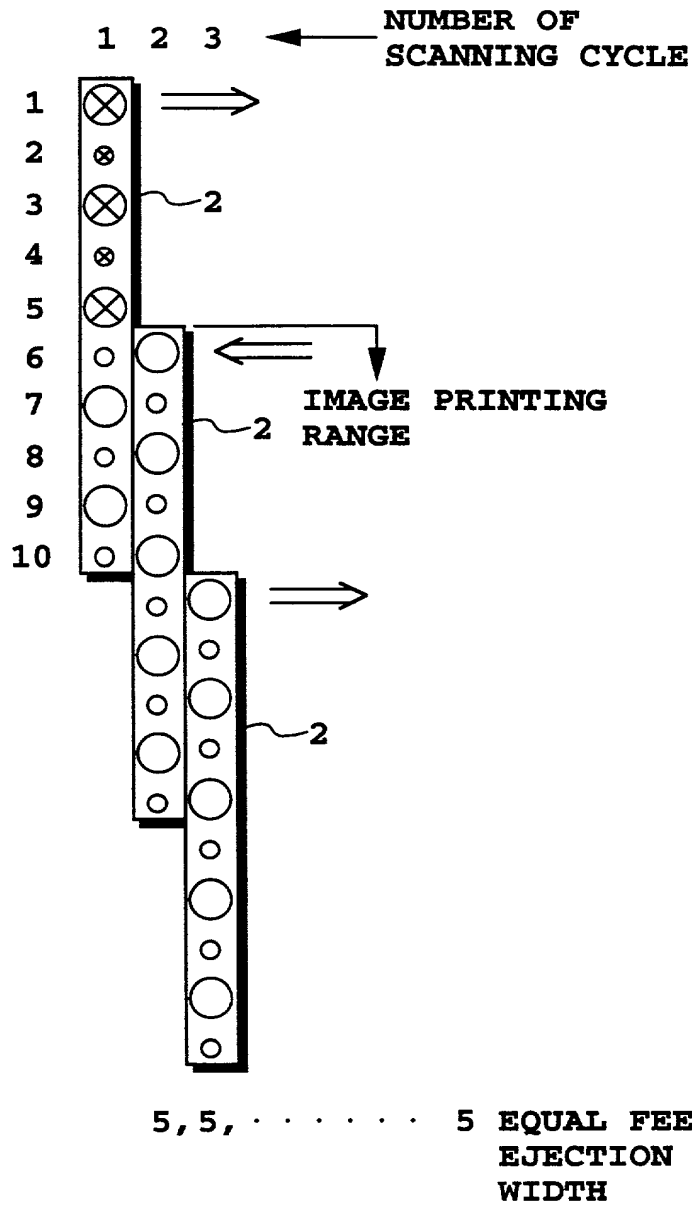
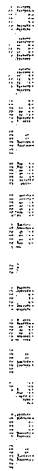


FIG.47

[illegible]

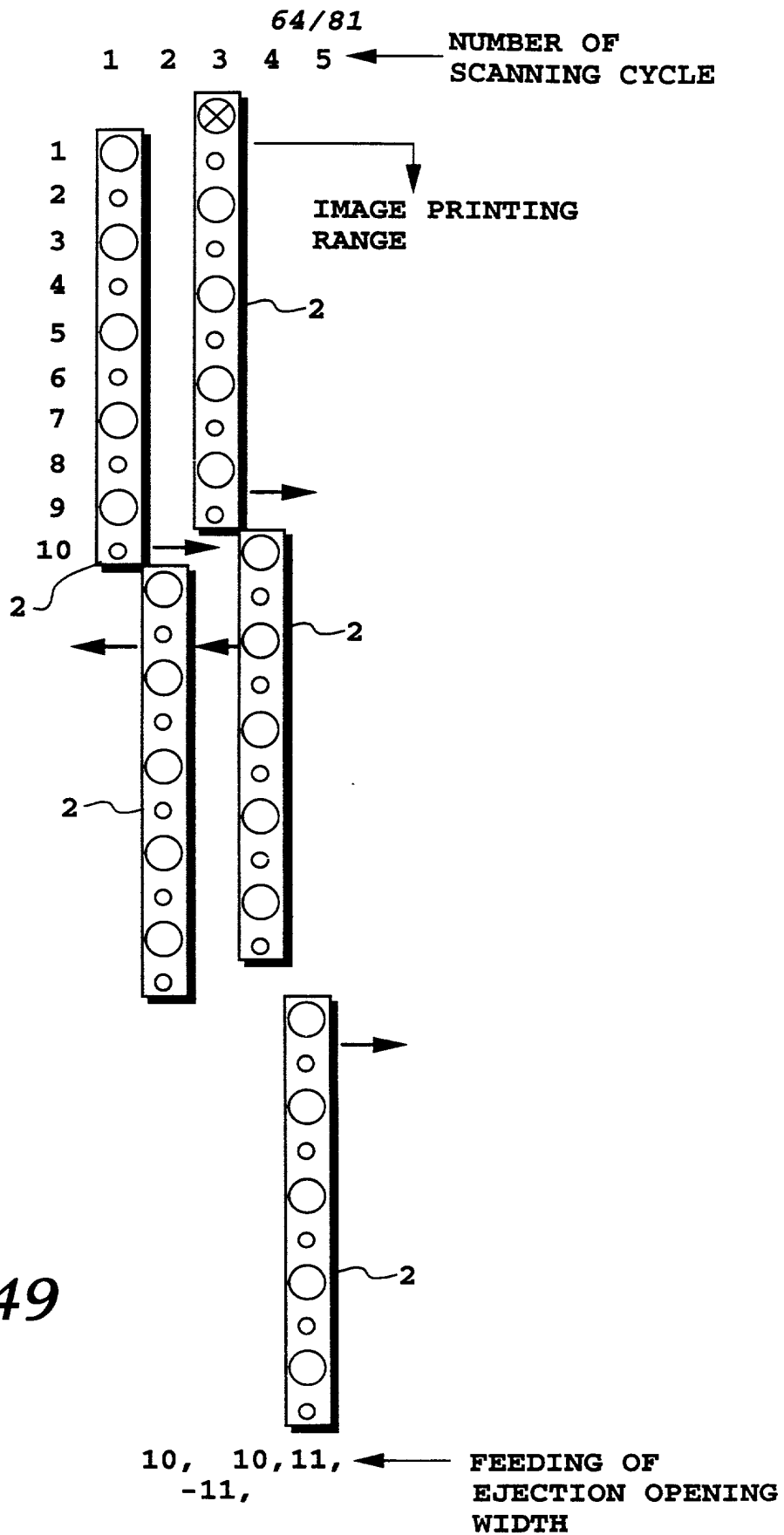


FIG.49

65/81

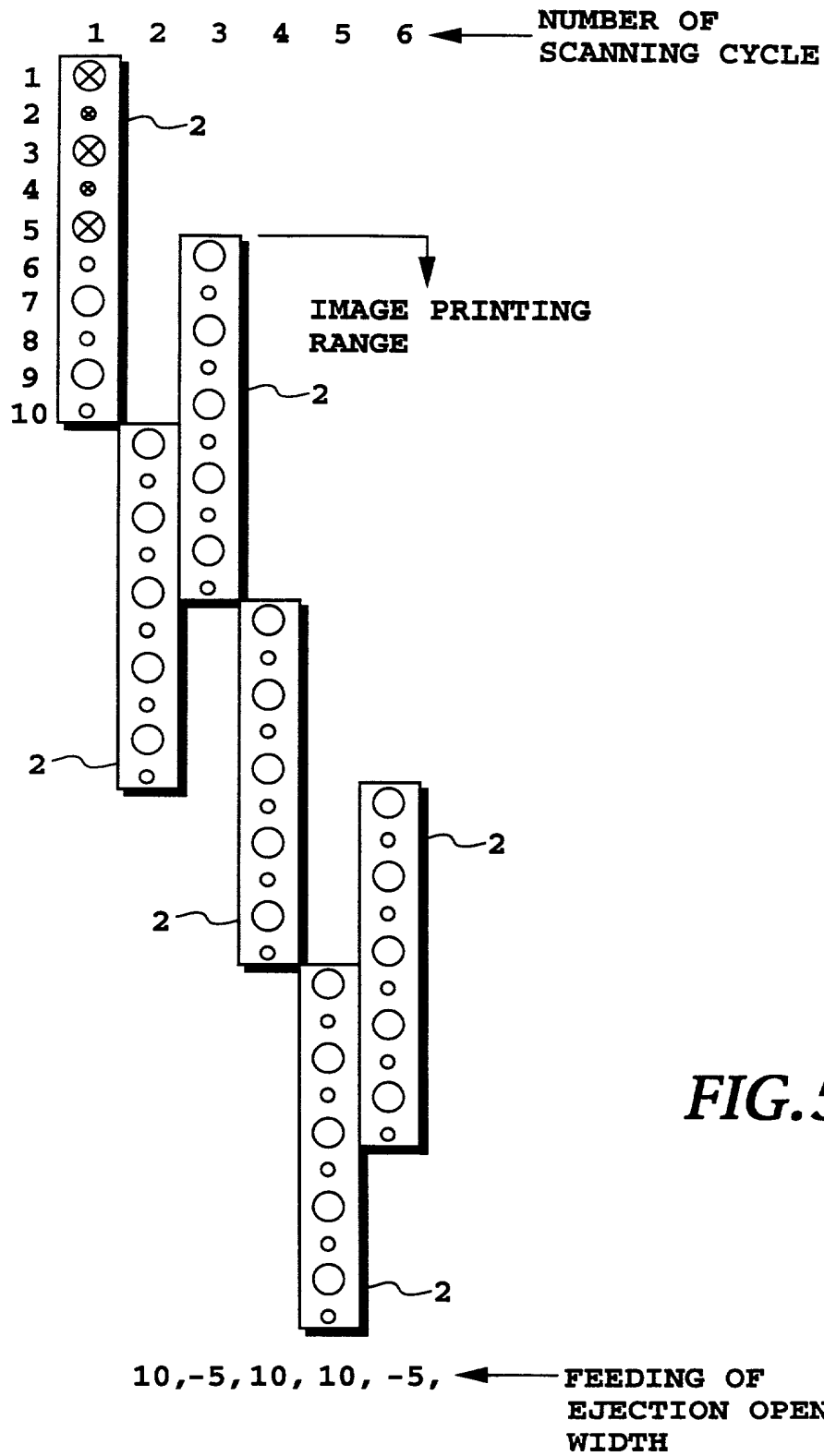


FIG.50

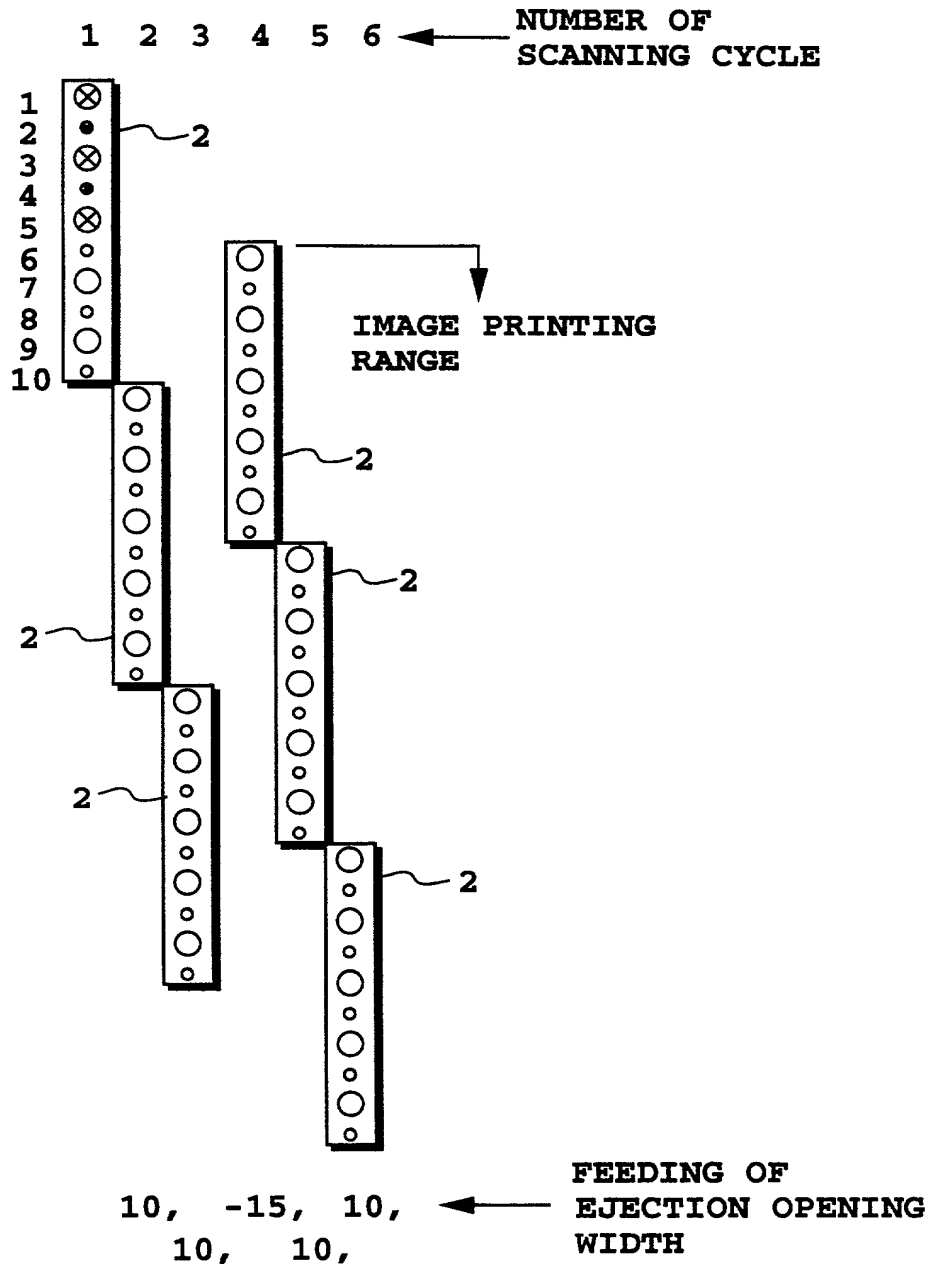


FIG.51

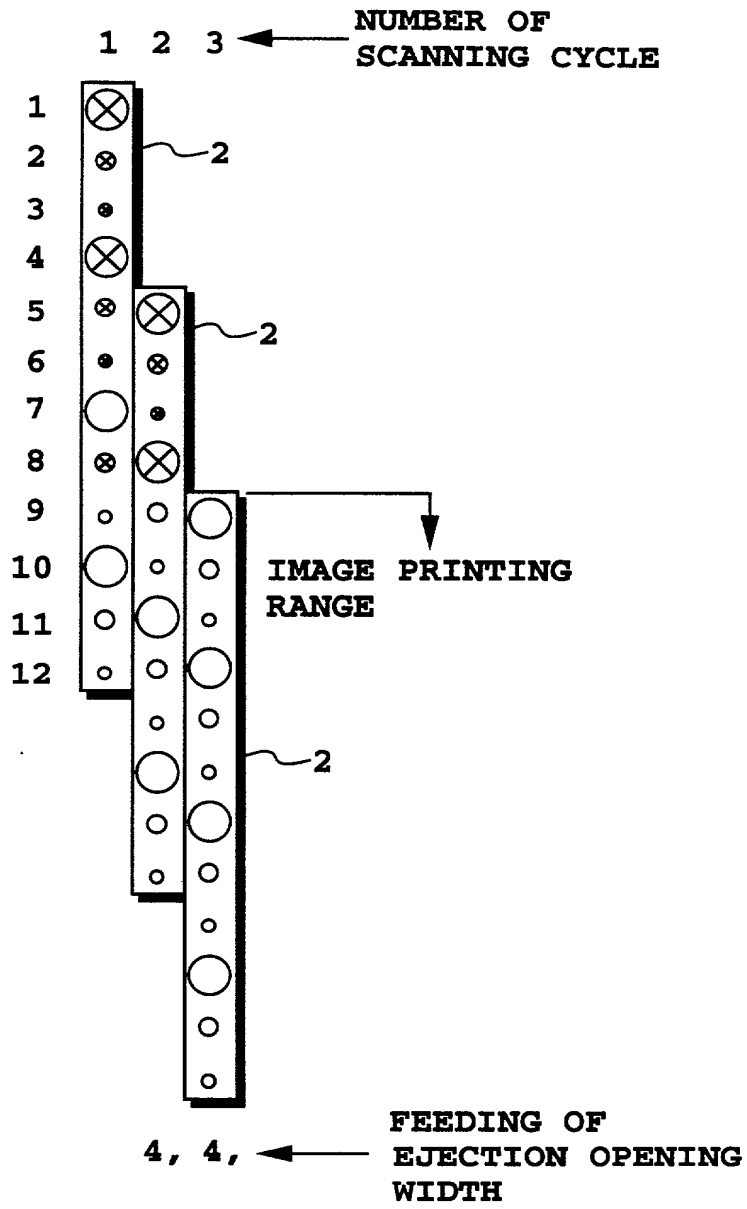


FIG.52

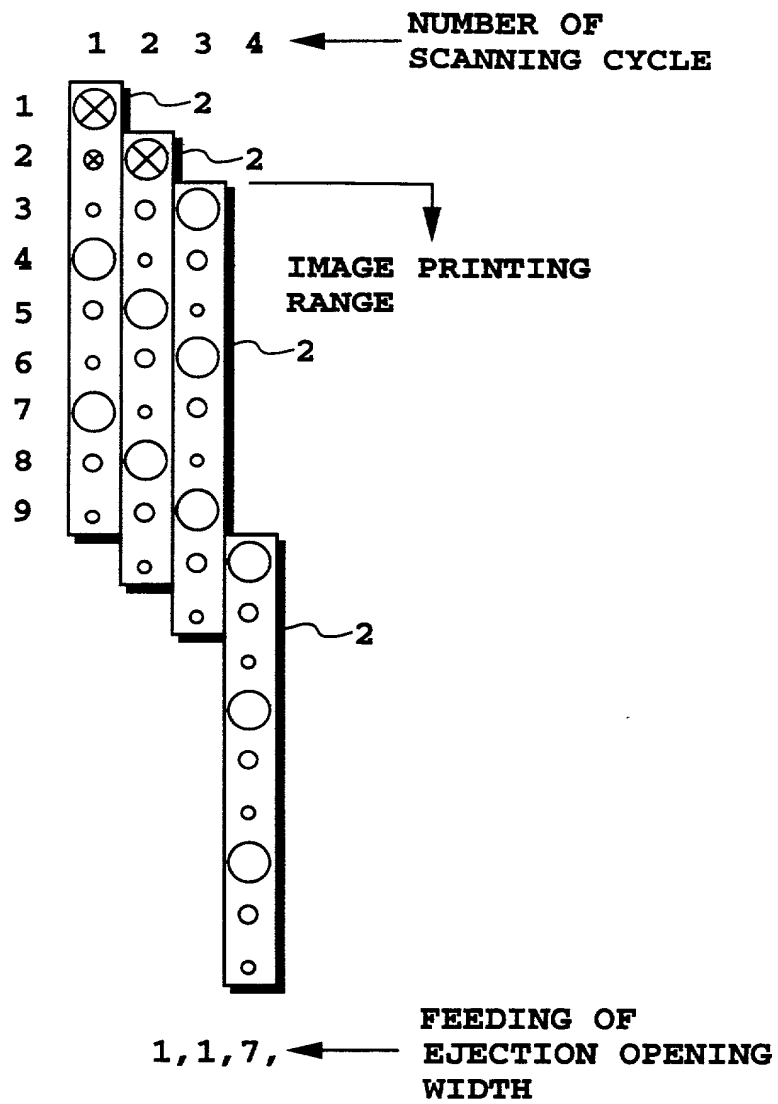


FIG.53

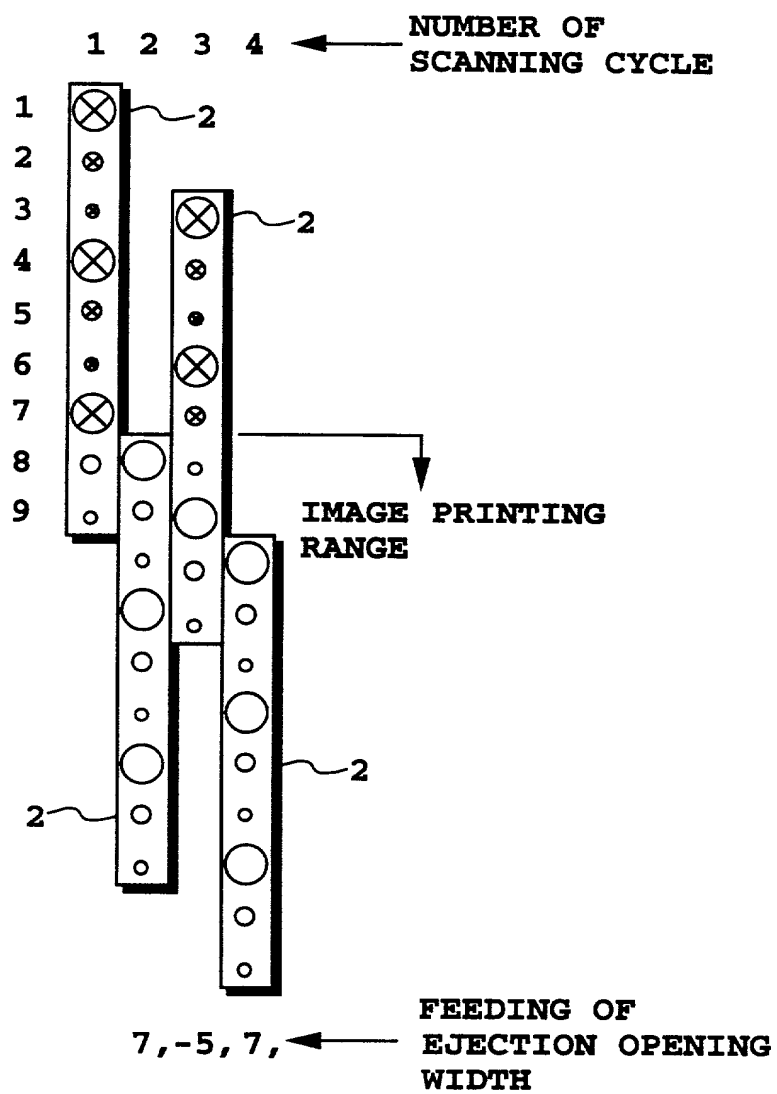
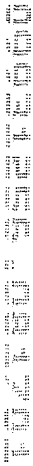
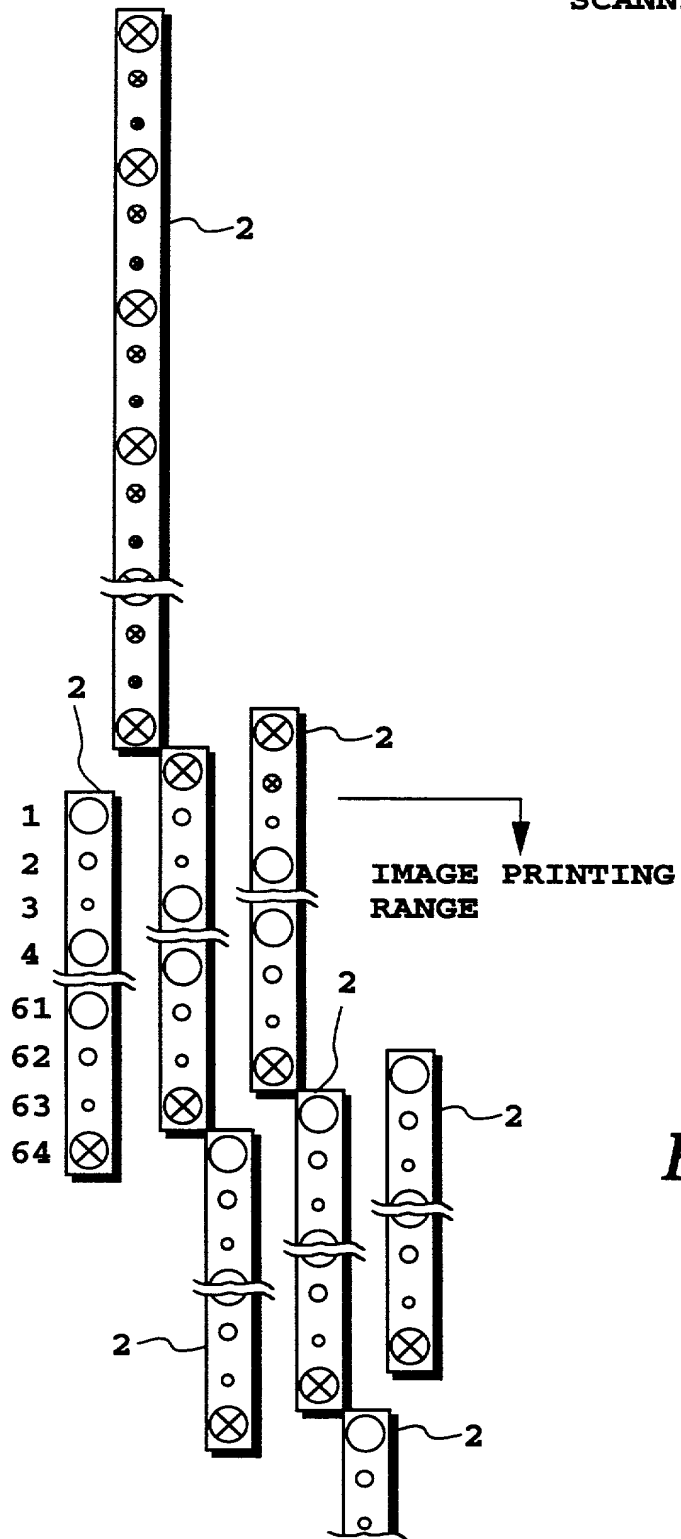


FIG.54

[illegible]

NUMBER OF
SCANNING CYCLE

—

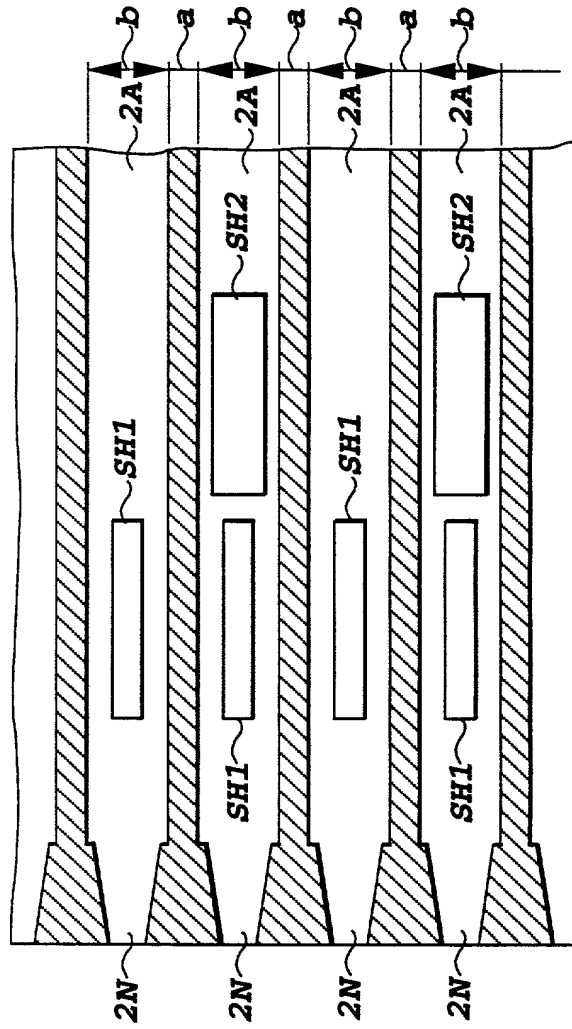


FIG.57A

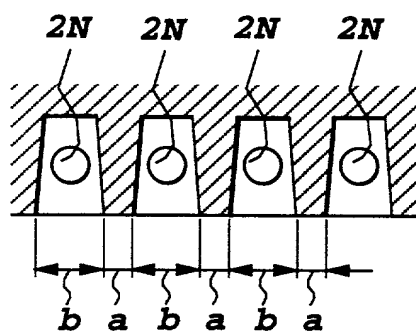


FIG.57B

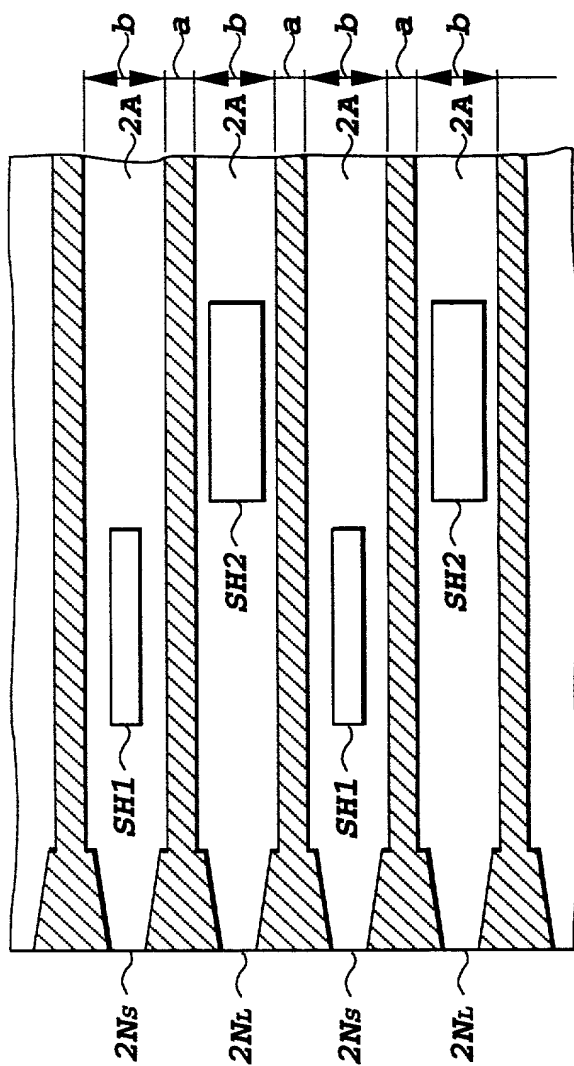


FIG.58A

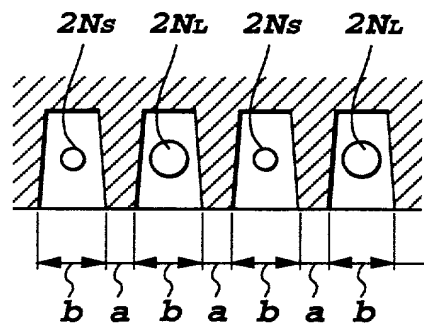


FIG.58B

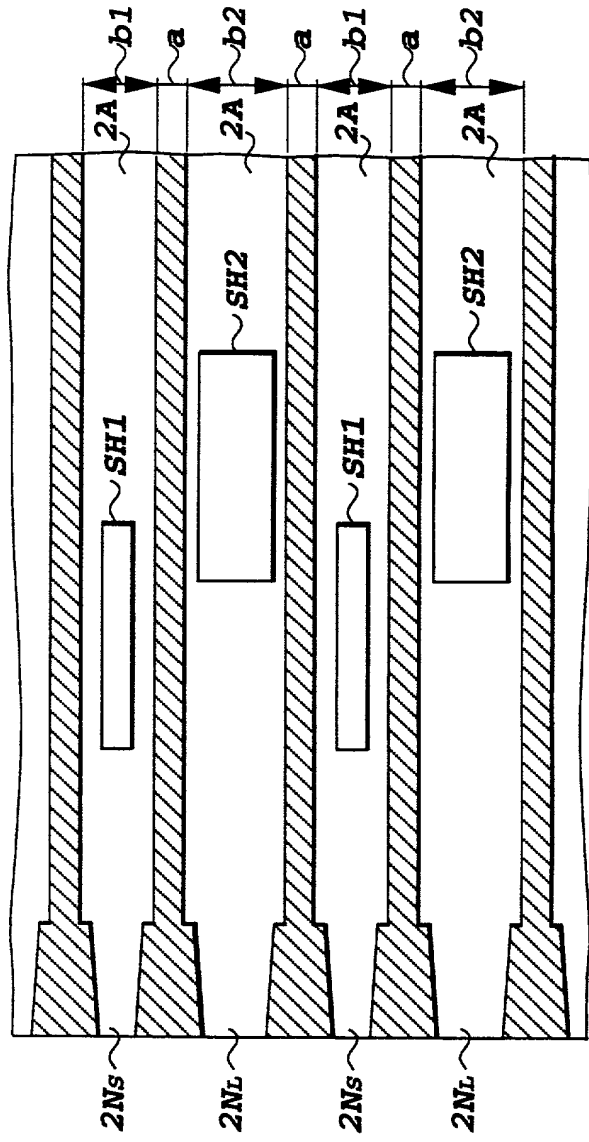


FIG. 59A

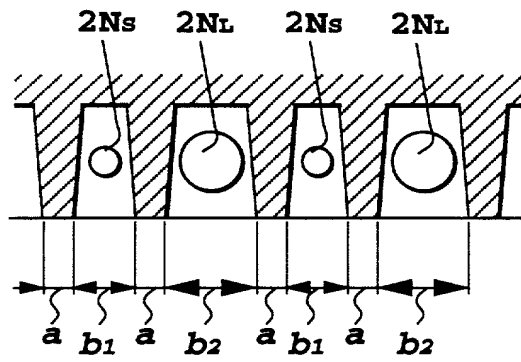


FIG.59B

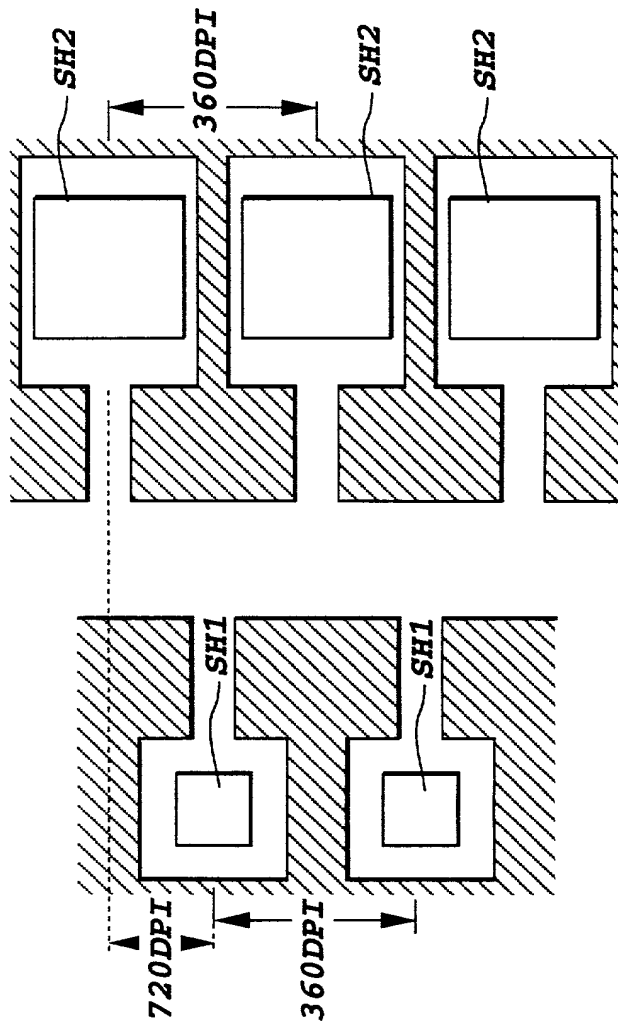


FIG. 60A

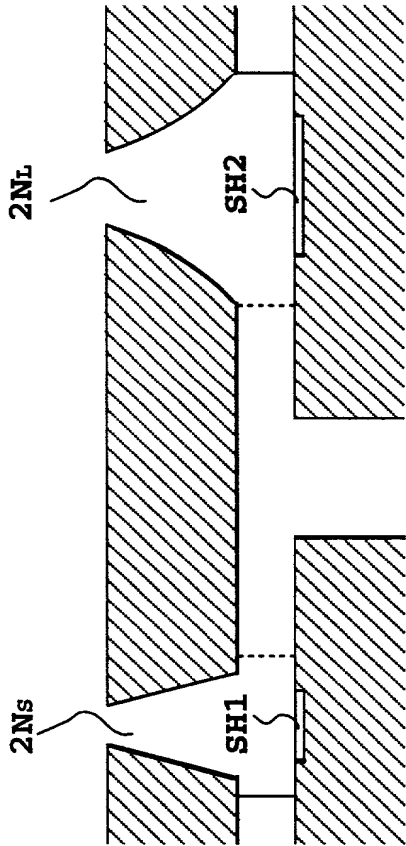


FIG. 60B

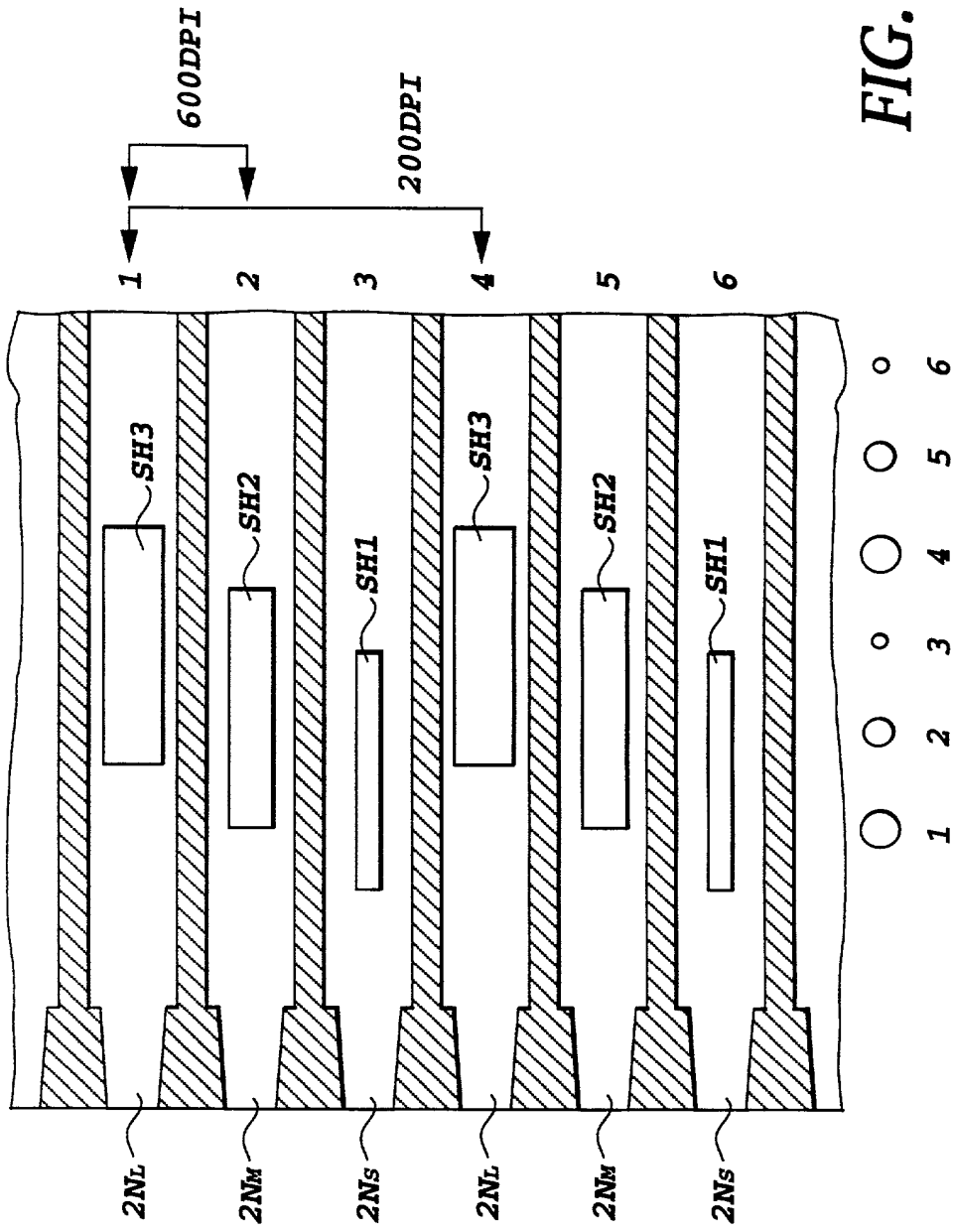


FIG.61

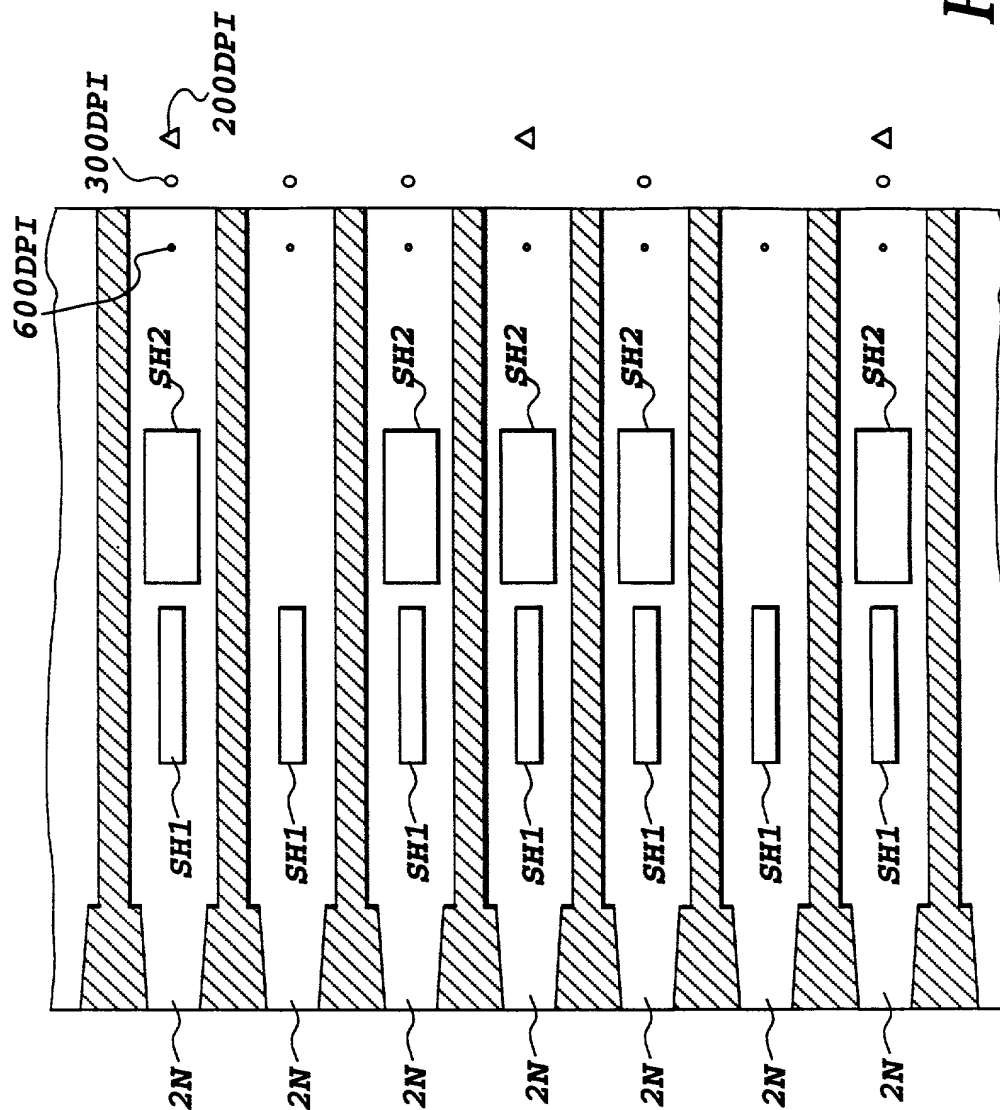


FIG.62